# The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLVI. CHICAGO, ILLINOIS, APRIL 14, 1906. No. 15.


## Address

### TWENTIETH CENTURY SURGICAL PROBLEMS*


H. D. NILES, M.D.

SALT LAKE CITY.


No thoughtful student of medicine can fail to be profoundly impressed with the surgical work and achievements of the past century. Revolutionizing discoveries have been made, new principles established, and perfected methods of procedure evolved in such rapid succession that we who stand just within the threshold of the twentieth century, contemplating with wonder and gratitude the triumphs of the past and trying to formulate plans for the future, may feel that there is little remaining for us to do in hastening the progress of surgery.

But if we rightly construe the lessons taught by the work and workers of the past we will not long remain unmindful of the responsibilities and opportunities of the present. For they reveal more or less distinctly the great undeveloped possibilities of surgery that await the solution of problems which we and those who follow us must strive to solve—one by one—until that time shall come when there is no mortality or suffering from surgical diseases.

I trust that on this occasion we may find ourselves in sympathy with the thoughts suggested by these lessons of the past and interested to consider those surgical problems that confront us to-day. For if we are to do our part toward the advancement of surgery we must seek the elements of future success in the study of present failures.

It seems to be the tendency of modern surgery to magnify the importance of manners and methods and at times to forget that all our real advances and most substantial achievements depend now, as always, not on our inventing or blindly imitating new plans of procedure, but on our alertness in diagnosis and our faithful allegiance to sound surgical principles as they are gradually developed from our growing knowledge of anatomy, physiology and pathology.

No one who has kept in touch with our recent experiences in the surgery of the brain, lungs, pancreas, spleen, peritoneum and other organs can escape the conviction that with a clear definite idea of the physiology of these parts the results of our surgical endeavors would be infinitely more satisfactory than we are able to obtain with our present knowledge. In brain surgery our many failures can not be charged to any lack of operative skill, but to our inability to accurately locate the exact pathology early enough to insure its safe removal or correction.

The same may be said of the morbid conditions of the spleen, pancreas and in a degree of the stomach. Until we are better informed by the physiologist of the normal functions of these organs we cannot hope always to differentiate between the normal and the abnormal. The evidence that points to the one and excludes the other can only come to us through concentrated specialized efforts which the average surgeon is technically unfitted to undertake.

We have been taught to believe that the normal mobility of the gastrointestinal canal and the pelvic organs is essential to the healthful performance of their physiologic functions. But we need to know more of the anatomy, physiology and pathology of these parts if we are to take into stricter account the disturbances, distresses and diseases that may follow when they are immobilized by inflammatory lesions, pressure of tumors or surgical operations.

We need to know more of the phagocytic absorption and reparative powers of the peritoneum and other tissues of the body. In obtaining this knowledge clinical observations and the testimony of patients may be helpful, but our most convincing evidence must be based on special experimentation in our laboratories, to be afterward tested in actual practice.

The line that divides surgical diseases from non-surgical is still somewhat vague and indistinct, and one of the most common sources of error in treatment arises from the fact that we are often in doubt as to when and how far we may safely trust to the reparative resources of Nature and under what conditions we should resort to prompt operative interference. We know that many morbid conditions may yield more or less perfectly to Nature's reparative powers, and we have learned of other morbid conditions that can not be modified, corrected or removed except by mechanical means. But until the line that divides the limitations of rational medicine from the boundaries of surgery is more clearly defined the internist and surgeon will often encroach on each other's proper field, and the best endeavors of both will fail to produce the most satisfactory results. To establish this line we must again seek assistance from the physiologist and the pathologist, for we need to know not only more of the functions of the different tissues of the body in health, but we must become better acquainted with the reparative absorptive and phagocytic powers of these tissues in the presence of the various pathologic processes and in the different stages of the disease. Even this is not enough, for theories evolved in the laboratory or dead-house, however suggestive or plausible they may appear, have no established practical value until their real worth is determined when the crucial test is applied at the bedside or on the operating table in the presence of physicians and surgeons competent to pass judgment on their merit.

Those who fairly consider the mortality and suffering that attend those diseases associated with pathologic

* President's Address before the Western Surgical and Gynecological Association, Kansas City, Mo.

processes which we can not as yet positively determine or rationally treat, because of our lack of knowledge of physiology and pathology, must feel that the profession of the twentieth century has a wide field worthy of their highest endeavors. For example, epilepsy, glaucoma and exophthalmic goiter annually ruin the lives and happiness of many human beings, and until the mysterious causes of all these afflictions and the means for correcting them are made known we surely have an ample incentive to continue our studies.

We have learned how to render patients immune from the effects of certain pathogenic microbes and their toxins, but so long as tubercle bacilli, typhoid bacilli and the pyogenic bacteria elude our efforts there will still remain an incomplete chapter in the progress of medicine which only the physiologist and the pathologist can favorably conclude.

We hear much of preventive medicine and little of preventive surgery. The triumphs of the former are heralded by the internist with justifiable pride. The failures of the latter the surgeon has frequent occasion to confess with humiliation. Every too-late operation is a painful reminder of our sacred duty to prevent the possible and probable progress of a pathologic process by every means in our power, even to the employment of preventive surgery, for here preventive surgery is timely surgery.

Thus far our success in surgery has been measured largely by our ability to cope with advanced disease, after it has become an immediate menace to life and health. But the time can not be far distant when the importance of recognizing the antecedent pathology of cancer, ulcer, surgical kidney, pus-tubes, prostatitis and many other grave lesions will be impressed on the profession, and the public will be educated to choose "preventive" rather than "last resort" surgery.

Non-malignant inflammatory lesions and incomplete obstructive twists of the sigmoid are the causes of much suffering and not a few deaths, that we may hope to avert when we learns to regard surgical pathology here, as in other parts of the alimentary canal. This is a comparatively new and certainly worthy field of study that invites the attention of the surgeons of to-day.

Our present failures to interrupt the progress of inflammatory lesions, while they are yet safely accessible and before they reach dangerous stages or regions, are responsible for a large proportion of the suffering and mortality of our operative procedures. Every case of appendiceal abscess, pyosalpinx, cancer of the stomach, malignant disease of the sigmoid, mastoid disease or surgical kidney should bring to the mind of the medical attendant as well as the operator a mental picture of the antecedent pathology and serve to strengthen their determination to seek out means for recognizing it early enough to exclude the dangers of a late operation on a resultant pathology.

Every poor unfortunate creature we meet on the street who is crippled or deformed by the ravages of tubercular disease is a mute but pathetic appeal to our profession to advance preventive surgery until mankind is free from this most prolific source of misery and unhappiness.

I have briefly referred to a few of the many problems that in the progress of surgery confront us to-day awaiting solution.

As we take these problems into thoughtful account and appreciate the causes of our present failures we are forced to conclude that to-day and always our great advances in surgery can only come from a clearer comprehension of those laws of Nature that govern human life and vital processes in health and disease, and that the anatomist, the physiologist and the pathologist are destined to remain the most potential factors in progressive surgery.

But it is equally true that so long as a large proportion of these scientific workers are permitted to limit their best endeavors to the teaching of students and the filling of subordinate positions in hospitals they can never fully meet their highest obligations to surgery. And so long as physicians and surgeons are compelled to rely on their own college acquired knowledge of anatomy, physiology and pathology we can not reasonably expect to make much progress in original scientific research or much headway in solving the problems that confront us to-day.

The very nature of these problems and their vital importance demand that we surgeons should press into more active and general service and bring into more intimate association the anatomist, physiologist, pathologist and internist.

This is distinctly an age when combinations of special forces rule the world, control all its enterprises and govern the destinv of every undertaking of any magnitude. In surgery there is a greater need than ever before for an exhibition of this same progressive spirit of the times. We must combine our forces if we are to meet the necessities of the new existing conditions. Single handed no surgeon can hope to accomplish much in the face of the peculiar conditions of to-day. At present the various laboratory workers are undoubtedly inclined to attach too much importance to theoretical conclusions which may not be applied to advantage in practice, while the operator is unquestionably prone to have an exaggerated idea of the lessons taught in the operating room. The internist, on the other hand, is often placed in the embarrassing position of accepting the teachings of both, while at the same time he strives to please his patients and preserve his own self-respect.

All these workers should be brought into the closest possible relations, and in practice as well as theory they should learn to regard pathologic processes and their rational treatment from the same point of view. The surgeon and the internist certainly have need to harmonize and perfect their ideas of pathology and treatment by a more intimate association in their daily work than is usual or often possible under existing conditions. In this way the internist would often see and become familiar with a pathology as revealed on the operating table, which in his consulting room or library he could only picture imperfectly, and might be tempted to treat symptomatically.

The surgeon should find time and opportunity to study at the bedside the earlier symptoms of surgical diseases when the indications are most obscure. He needs to know more of the trials, difficulties and doubts of his colleague, if he is to be kindly in his judgment, and he has abundant reason to familiarize himself with the symptoms of pathology in every stage if he is to decide questions pertaining to "rational" and "timely treatment."

The laboratory worker should no longer rely exclusively on the miscroscope to furnish him with the best and broadest views, or trust alone to scientific experimentation to give him the most practical conception of disease. He, too, needs to often see and study morbid conditions in life and to know well the symptoms, suffering and danger they produce if he is to impart the most practical knowledge to students or become the most

helpful associate of surgeons. For it is not in our laboratories, but in our consulting rooms, at the sick bed and at the operating table that we have the greatest need to know more of pathology and are inspired with the strongest determination to study all those factors that have to do with the deviation and restoration of health.

If we are ever to solve the problems that baffle our endeavors to-day and place surgery on a much higher plane than it now occupies, our scientific workers must become more practical, our practical workers must become more scientific, and our physicians and surgeons must become more nearly united in their ideas of pathology and treatment. And this can only be accomplished by an organized movement tending to bring all workers into closer touch and sympathy with each other.

Such a combination of forces as I have outlined can be organized and made effective in every community capable of supporting a hospital and a medical society. And in this cause our hospitals should be willing and desirous to meet our needs, for in doing so they would in time fulfill their highest mission of usefulness by developing a great system of scientific institutions distributed throughout the world, where not only the sick and afflicted would be kindly and skilfully attended, but where earnest experienced men of mature judgment might meet and study and work harmoniously together in their efforts to solve those problems that have to do with the prevention of disease, the saving of life and the mitigation of suffering.

But if we are to secure the full benefits to be derived from our hospitals and from our colleagues, the internist and the laboratory worker we must do our part. The medical profession must either own their own hospitals or they must prove to hospital governments or hospital benefactors that our cause is a worthy one and that with their help we can and will make our hospitals a greater blessing to mankind than is possible under the present system.

We must learn to realize that every laborer is worthy of his hire, and that until the recompense of the laboratory worker is proportionate to that of the physician and surgeon the laboratory will not attract its proportion of good men.

We must see to it that this work and these opportunities be not restricted to the favored few who happen to be on hospital staffs. We need the united support and help of every member of the whole profession, and every reputable graduate in medicine should be invited, encouraged and urged to begin early their postgraduate studies and researches, and to continue them through their active life by participating in the educational and other advantages to be offered by those institutions.

These and many other questions which arise in this connection can and should be discussed in detail among ourselves, in our societies and in our medical journals, but we may be assured that in due time they can all be settled satisfactorily if we approach them in a spirit of fairness and good faith.

The workers of the past century had their duties, responsibilities and opportunities; we have ours. They had their means and methods for advancing surgery; we must formulate ours to meet existing conditions. They overcame their difficulties and achieved their triumphs; we will strive to do likewise: and when this association shall hold its regular annual meeting a hundred years hence, and a new and brighter chapter in the history of surgery is read, let us hope that chapter may not be made up of a long list of brilliant operative procedures made possible by easy-acquired methods, but rather let us trust it may record the coming of many substantial blessings and benefits to mankind through the earnest systematized and united efforts of the men of the twentieth century.

## Original Articles

### INFANTILE SCORBUTUS.

AN ANALYSIS OF FIFTY CASES, INCLUDING TREATMENT.

JOHN LOVETT MORSE, A.M., M.D.

Instructor in Pediatrics, Harvard Medical School; Assistant Physician at the Children's Hospital and at the Infants' Hospital; Visiting Physician at the Floating Hospital.

BOSTON.

Infantile scorbutus developed in seven cases under my direct observation. Six cases were brought to my office, nine were seen at the Infants' or Children's Hospitals, and twenty-eight in consultation with other physicians. The true nature of the illness had been recognized in but five of those seen in consultation.

The following diagnoses had been made previously in these cases and in those seen at the office and hospitals: Acute nephritis, 5; tumor of bladder, 1; excess of uric acid with consequent staining, 2; arsenical poisoning with inflammation of the kidneys, 1; rickets, 2; spinal or Pott's disease, 6; hip disease, 1; periosteitis, 1; rheumatism, 6; gout, 1; nervousness, 1; infantile paralysis, 1; syphilis of cord, 1; difficult dentition, 5. in four of which the gums had been lanced; strain, 1; injury, 1; tuberculosis, 1; gumma of eye, 1. In two other cases the physicians stated that they had no idea what was the trouble.

It is evident that the errors in diagnosis depended somewhat on the prominence of individual symptoms. It is probable, moreover, that other diagnoses had also been made which were not noted in the records. In speaking of errors in diagnosis in connection with infantile scurvy it is only fair to state that it is also possible to mistake other conditions for this disease. I have mistaken congenital syphilis and hematuria from lead poisoning for scurvy and have known septic arthritis to be mistaken for it.

*Sex and Age.*—The patients were nearly evenly divided between the two sexes, twenty-three being males and twenty-seven females. The age at the onset of the symptoms varied between three and nineteen months. Thirty-three or 67 per cent. of forty-nine cases with complete data were between six and ten months. Seven were under six months and nine over ten months.

The duration of the symptoms before the patients were seen varied between two days and ten months, in all but six being between one week and three months. The age of the patients when first seen varied between four and twenty-one months, thirty-seven, or 74 per cent., of fifty cases being between seven and twelve months. Four were under seven months and nine over twelve months.

*Etiology.*—Table 1 shows the foods which were being taken at the time when the symptoms of scurvy developed.

TABLE 1.—FOODS DURING THE USE OF WHICH SCURVY DEVELOPED.

| | |
|---|---|
| PROPRIETARY FOODS: | |
| With water | 8 |
| With milk: | |
| Irrational mixtures, boiled | 9 |
| Irrational mixtures, pasteurized | 2 |
| Rational mixtures, unheated, pasteurized | 2 |
| Rational mixtures, heated and peptonized | 1 |
| Rational mixtures, unheated | 8 |

| | |
|---|---|
| **MILK AND WATER MIXTURES: Irrational:** | |
| Peptonized and boiled | 1 |
| Unheated | 1 |
| Heat unknown | 1 |
| **LABORATORY MIXTURES:** | |
| **Too weak:** | |
| Peptonized and pasteurized | 1 |
| Pasteurized | 1 |
| Rational, pasteurized | 4 |
| **HOME MODIFICATIONS:** | |
| Irrational, same for four months pasteurized | 1 |
| Too weak, same for months, unheated | 1 |
| Unheated | 2 |
| Rational, boiled | 2 |
| Peptonized and pasteurized | 2 |
| Barley water, peptonized and pasteurized | 2 |
| Barley water, pasteurized | 1 |
| Oatmeal water, pasteurized | 1 |
| Same for five months, pasteurized | 1 |
| Pasteurized | 1 |
| Pasteurized and beef juice | 1 |
| Barley water, unheated | 1 |
| **GENERAL DIET at 13 months, but with no fruit or vegetables** | 1 |

From the point of view of modern ideas of reasonable infant feeding the food was irrational in nineteen of the cases taking proprietary foods, in four of those taking milk mixtures, and in the case of the infant on a general diet, making a total of twenty-four. Milk was used in the preparation of the food in forty-one cases, while no milk was used in eight cases. One baby was on a general diet. In the forty-one cases in which milk was used in the preparation of the food the mixture was boiled in twelve, pasteurized in nineteen and unheated in nine, while in one case there was no data as to whether or not heat was used. The food was also peptonized in four of the pasteurized and in one of the unpasteurized mixtures. The mixture was manifestly too weak in five cases, and the same mixture was continued for months in two cases. The food was often unsuitable in several ways in a single case. In one case only was a rational unpasteurized mixture being taken, and that was prepared with barley water instead of with water. Bread and crackers in two, egg in one, beef juice in one and a general diet in another case failed to prevent the development of the disease.

Analysis of the foods taken by these cases justifies the conclusions of the committee of the American Pediatric Society that "the development of the disease followed in each case the . . . employment of some diet unsuited to the individual child" and that "the farther a food is removed in character from the natural food of a child the more likely its use is to be followed by the development of scurvy." Analysis of this table also seems to show that the absence of "freshness" and the heating of the food are very important elements in the production of scurvy.

The digestion was good in twenty-three and feeble in twenty-seven of these cases, apparently showing that the scurvy was not due to disturbance of digestion and that foods may cause scurvy without causing disturbances of digestion.

The onset of the scurvy was immediately preceded by measles in one case, influenza in three, bronchopneumonia in one, and infectious diarrhea in four. It is probable, however, that these diseases had no direct influence on the development of the scurvy unless possibly by weakening the general resistance.

There were signs of rickets in the osseous system in all but nine of these cases. They were slight in twenty-six, moderate in eleven, and marked in four. There was, however, no evident relation between the severity of the rickets and that of the scurvy. It seems rational to conclude, therefore, that the rickets had no influence on the development of the scurvy and that if there was any connection between them it was merely that they were both the results of a common cause.

The only evident cause for the development of the scurvy in these cases, therefore, is found in the food. No further conclusions as to the etiologic connection of the food and the disease than those already stated are, however, justified.

*Symptoms.*—It seems best to analyze the private cases separately as to the order of the development of the symptoms, as it is possible to get from them a better idea of the onset and course of the disease in its early stages than from those seen after its more complete development. In all of these cases a gradual loss of color preceded for weeks or months any other symptom. This loss of color was often associated with loss of appetite. Tenderness of the back was the next symptom noticed in two, tenderness on handling in three, and hematuria in two cases. The next symptoms which developed were swelling of the gums in one, tenderness on handling in two, and paresis of an extremity in two. The time between the onset of the second and third symptoms varied between one week and two months.

Table 2 shows the comparative frequency of the various symptoms and also the relative order of their appearance.

TABLE 2.—ORDER OF APPEARANCE OF SYMPTOMS.

| | First. | Second. | Third. | Fourth. | Fifth. | Sixth. | Total. | Private Cases Added. |
|---|---|---|---|---|---|---|---|---|
| Tenderness | 21 | 12 | 2 | 1 | .. | .. | 36 | 43 |
| Inflamed gums | 10 | 3 | 2 | .. | 1 | .. | 17 | 18 |
| Hematuria | 7 | 1 | .. | 1 | .. | 1 | 10 | 12 |
| Paresis | 4 | 9 | 5 | 2 | .. | .. | 20 | 22 |
| Pallor | 2 | .. | .. | .. | .. | .. | 4 | 11 |
| Swelling | 1 | 2 | 5 | 2 | 3 | .. | 13 | 13 |
| Ecchymoses | 1 | .. | 3 | .. | 2 | .. | 6 | 6 |
| Hemorrhage: Bowels | .. | .. | 1 | 1 | .. | 1 | 3 | 3 |
| Mouth | .. | .. | .. | 1 | .. | .. | 1 | 1 |
| Orbit | .. | .. | .. | 1 | .. | .. | 1 | 1 |

It is noticeable how seldom pallor was noted in these cases. That it was overlooked, however, is shown by the fact that on examination pallor of various degrees was found in thirty-six, or 75 per cent., of forty-eight cases. In five others the color was noted as fair, while in only seven was it good. Examinations of the blood were made in but two cases. They both showed a marked diminution in the hemoglobin and in the number of red corpuscles with a slight leucocytosis, the relative proportions of the white corpuscles being normal. Tenderness was the symptom most commonly noted, while paresis of the extremities comes next, closely followed by inflammation of the gums, swelling of the extremities and hematuria. Tenderness on handling was the first symptom noted in nearly one-half of the cases, swollen or purple gums in about one-quarter, and hematuria in nearly as many.

Fever was never mentioned among the symptoms, but in several of the hospital cases the temperature was slightly elevated, running in one case as high as 103° F. No other causes were found for these temperatures, which diminished steadily with the cure of the scurvy. It is reasonable to conclude, therefore, that the fever was due to the scurvy and not to complications.

There was very great variety in the suddenness of the onset and in the severity of the early symptoms; for example, the gums were swollen for six months in one case, and there was hematuria in another for three months before the appearance of tenderness, while in still another there was tenderness in the legs for two months before there was any swelling. In one case there was a history of a fall, with immediate loss of power and pain in one leg; in another, marked swelling of the leg developed in forty-eight hours after a fall; while in still another a fall on the floor was followed by immediate loss of power

in the leg, this in turn being followed in five weeks by inflammation of the gums.

*Physical Signs.*—Careful analysis of the physical signs found in these cases shows that there must have been many errors in observation regarding the frequency and order of development of the symptoms. This has already been shown in the note regarding pallor.

Twenty-nine infants had teeth and nineteen had no teeth. The gums were normal in six and abnormal in twenty-three of the cases with teeth, while they were normal in seventeen and abnormal in only two of those without teeth. The gums were normal, therefore, in twenty-three and abnormal in twenty-five cases. When there were both upper and lower teeth the upper were involved alone in eight cases, while the lower were never involved alone. The gums were involved about all the teeth in fifteen and about part of the teeth in eight cases. Other portions of the gums besides those about the teeth were involved in eight cases.

One leg only was affected in nine cases; in seven of these it was the right and in two the left leg. Both legs were affected in twenty-five cases. The arms and legs were both affected in eleven cases, but the arms were never affected alone. Pain on motion of the extremities was noted in forty-three cases; that is, in practically all those which were not cases of simple hematuria. There was tenderness on handling in thirty-seven cases. Limitation of passive motions was noted in but ten and paresis in but eight cases. These latter figures are undoubtedly too low because of the failure to record all the observations. Swelling limited to the diaphyses of the bones was present in twenty-seven cases. In one the sternal ends of the clavicles were affected. The arms were affected in ten cases, the swelling being in the upper arm in four and in the lower in six. The legs were affected in thirty-four, the thigh being involved in seventeen, the lower leg in fifteen and the feet in two cases. The swelling sometimes involved the whole, but was more often limited to a portion of the diaphysis. The upper portion of the humerus, the lower of the bones of the forearm and of the femur, and the lower portion or the whole shaft of the tibia were most often involved. The swelling in the feet was always on the back.

The position of the legs was very characteristic in twenty-seven cases, although the completely typical position was not always present. The tendency was always to hold the lower extremity rigidly with the thigh flexed on the abdomen, the leg flexed on the thigh, the foot extended and the whole leg rotated outward.

Pain on motion of the back was noted in five cases. This proportion is undoubtedly too low, partly because of failure to record the point and partly because of the difficulty of determining the presence or absence of pain in the back when there is pain in the legs.

Ecchymoses were present in eleven cases. They were on the legs and feet in five, the eyelid in three, the face in two, the body, chest and abdomen in one each, and all over the body in one. There was also a hemorrhage into the orbit, with consequent protrusion of the eye in one case.

There was edema in eleven cases. It was in the eyelids in two, in the legs and feet in five and in the feet alone in five. This was a true edema of the soft tissues and not an inflammation or hemorrhage under the periosteum.

*Cases of Hematuria.*—The cases of hematuria form such a characteristic and peculiar group that they seem worthy of separate consideration. The urine was normal in twenty and abnormal in fifteen cases. In three of these, however, it was merely noted that the urine stained the diapers red or brown. There were no data as to the urine in fifteen cases. Barring pallor in two of the private cases, hematuria was the first symptom noted in eight of the proved cases of hematuria. It was the only symptom of scurvy in two and in the rest preceded the other symptoms by one-half, one-half, three and one-half, four, five and one-half and nine weeks respectively. The urine was usually red, but was sometimes brown. The blood was both normal and abnormal, but usually normal. It was often present in large amounts. The amount of albumin corresponded to the amount of blood, which was often large enough to give an alkaline reaction. Hyalin and fine granular casts and an excess of cells were found occasionally; brown granular and blood casts were also found in one instance. In one of my own cases the true nature of the hematuria was not recognized until tenderness developed, while in the other it was recognized at once. In the other cases the diagnoses, based on the hematuria, were acute nephritis in five, tumor of the bladder in one, uric acid staining in one, and arsenical poisoning in one. The response to treatment was rapid and the urine became normal in all. There was marked improvement in the hematuria in one day in two cases. The urine was clear in five days in two, in ten days in two and in fourteen days in two cases. There were no accurate data as to the duration in the other six cases.

It is evident from these figures that the earliest symptom of scurvy is, as a rule, loss of color, which is often associated with loss of appetite. The first symptom to attract attention and to justify the diagnosis of scurvy is most often tenderness or pain in the legs or back on handling. Swollen and purple gums or hematuria may, however, precede the tenderness and pain. Tenderness and pain on motion of the extremities almost always develop sooner or later, and in about half of the cases are accompanied by swelling about the diaphyses. The legs are affected about three times as frequently as the arms. The gums are affected in about half of the cases; almost always when there are teeth, very rarely when there are no teeth. Hemorrhages, except under the periosteum, are comparatively uncommon.

The order in which the symptoms develop and the intervals at which they make their appearance vary materially. The onset may be very sudden or very insidious. Mild symptoms may persist in some cases for weeks and even months before the development of others, while in other cases several symptoms may appear together or in rapid succession, the typical picture of the disease being developed in a few days.

*Treatment.*—Recovery from the scurvy occurred in all cases, although a few died later from coincident diseases.

The food was not changed in fifteen cases. The foods are given in Table 3.

TABLE 3.

| | |
|---|---|
| Laboratory milk, pasteurized | 2 |
| Home modification, unpasteurized | 2 |
| Home modification, pasteurized | 3 |
| Proprietary foods with fresh milk | 2 |
| Proprietary foods with heated milk | 2 |
| Proprietary foods with water | 1 |

In all the other cases the food was changed, the attempt being made in every case to give not only a more rational food, but one more suitable for the individual baby. Proprietary food mixtures were changed to milk mixtures and milk mixtures to better milk mixtures. Sterilization was always stopped and pasteurization was stopped if the milk supply and time of year permitted. Peptonization was stopped in every case. In fact, the

food was made rational as to its chemical composition, and everything tending to destroy "freshness" as far as was possible omitted.

One patient was given lemon juice. All the others were given orange juice, except two that were given beef juice. Eight others also took beef juice in addition to the orange juice. One who was given beef juice alone took two tablespoonfuls daily while the milk was changed. The amount given in the other case is not known and the milk was not changed. Both recovered rapidly. As has already been mentioned, scurvy developed in one who was taking one ounce of beef juice daily.

The amount of orange juice given varied considerably. Seven patients took one tablespoonful daily; twenty, two tablespoonfuls; and one, four tablespoonfuls. Four took the juice of half an orange, and seven the juice of a whole orange daily. The amount is not stated in seven. In one case in which there was no result from ten drops of lemon juice given three times daily for a week, recovery was very rapid on the juice of half an orange daily. In another case there was no improvement noted in two days while taking one tablespoonful of orange juice daily, but when the amount was increased improvement was very rapid. It seems safe, therefore, to conclude that at least one tablespoonful of orange juice is necessary daily, and that two tablespoonfuls, or the juice of half an orange, is amply sufficient to bring about a rapid cure.

Pain and tenderness were usually the first symptoms to yield to treatment and were soon followed by the return of power in the extremities. Improvement in the condition of the gums usually began later and progressed more slowly. The disappearance of the swelling was, as would be expected, always slow. Marked improvement in the swelling, even if it was extreme, was always noticeable in a week. The protrusion of the eye was gone in six days.

An analysis of the results of the treatment in these cases shows that the mildest cases were well in two days, and that many cases were entirely well in five days. Almost all showed marked improvement in three or four days. Pain and tenderness were always gone in one week, while the gums were rarely normal before one or two weeks. Most cases were well, except for the remains of swelling and hemorrhages, in two weeks, while recovery was always complete in three weeks.

How soon the improvement may begin and how rapid it may be is shown by the following extracts from letters written by the parents of some of these patients: "Immediate improvement;" "better in twenty-four hours, kicking in forty-eight hours;" "different baby in a week;" "progress simply marvelous;" "immediate response to treatment;" "improvement before taking the juice of a whole orange."

70 Bay State Road.

---

## FEVER IN THE NEWBORN.

### A CONSIDERATION OF THE FEBRILE TEMPERATURES OBSERVED DURING THE FIRST DAYS OF LIFE, WITH REPORT OF AN EPIDEMIC INFECTION OF THE RESPIRATORY TRACT IN THE NEWBORN.

WILLIAM J. BUTLER, M.D.

CHICAGO.

An interesting phase of the first days of infant life is the many deviations from the normal temperature that occur and which are so frequently overlooked unless thermometry is regularly practiced.

It is not improbable, however, that this practice, the importance of which can not be too strongly urged, is seldom pursued to any extent even in maternity wards, unless an infant presents some marked evidence of illness; whereas the thermometer only in many cases renders it possible to determine early the presence of disease which by other methods of examination might be overlooked.

That this latter frequently occurs, and that an apparent want of acquaintance with diseases of the newborn exists, is well illustrated in the vital statistics by the meaningless terms ascribed as causes of death, to-wit, icterus, convulsions, etc.

The temperature of the newborn immediately after birth is somewhat higher than that of the mother, the temperature of the latter being from 0.2 F. (0.1 C.), according to Wurster,[1] to 0.9 F. (0.5 C), according to Davy,[2] lower than that of the child. In full term babes the rectal temperature is found to average, according to Barensprung,[3] 100 F. (37.81 C.); Lepine,[4] 99.8 F. (37.7 C.); Andral,[5] 100.2 F. (37.9 C.); Hennig,[6] 100.2 F. (37.9 C.). In consequence of the cooling of the surface incident to exposure and the first bath, where employed, there is a drop in the temperature in the course of an hour or two of from 1.76 F. (.95 C.), according to Schäfer,[7] to 3.3 F. (1.87 C.), according to Sommer.[8] Eross explains this apparently wide difference by assuming that some observers take the temperature immediately following the bath and thus do not note the subsequent decline. It gradually rises after several hours, and from twelve to thirty-six hours it reaches an average of 99.8 F. (37.67 C.), according to Eross;[9] 99.5 F. (37.5 C.), according to Jurgensen;[10] 99.2 F. (37.35 C.), according to Fehling.[11]

Forester[12] called attention to a second decline on the fourth day, at which time the temperature averages 98.8 F. (37.1 C.). Following this there is a second rise, first noted by Barensprung,[3] which reaches its maximum on the eighth day, averaging 99.2 F. (37.4 C.).

Feis[13] believes that the fall in temperature between the third and fifth days is due to hunger of the infant. He thinks there exists a direct relation between the decline on the fourth day and elevation on the eighth day and the increase in the quantity of nourishment taken, which was first suggested by Eross,[9] and to the gain in weight, which latter point had been previously made by Barensprung.[3]

Raudnitz,[14] however, was disinclined to accept the explanations offered for the double rise and fall of temperature in the first week, considering them conjectural, at the same time suggesting the less plausible theory that the second decline and rise of temperature occurring between the fourth and eighth days was a slow reflected compensatory wave following the first marked decline after birth. Lepine[4] observed a somewhat higher tem-

1. Wurster: Berl. klin. Wochft., 1869, No. 37, p. 393.
2. Davy: "Physiological Researches," 1868.
3. Barensprung: Müller's Arch. f. Physiol., 1851, p. 126.
4. Lépine: Gaz. Méd., 1870, p. 368.
5. Andral: "Note sur la température des nouveau-nés." Acad. des Sciences, 1870, p. 825.
6. Hennig: "Lehrbuch der Krankheiten des Kindes."
7. Schäfer: Inaug. Diss., Greifswald, 1863.
8. Sommer: Inaug. Diss., Berne, 1880.
9. Eross: Jahrb. f. Kinderhk., vol. xxiv, p. 189, also Arch. f. Gyn., No. 43, p. 306; also Jahrb. f. Kinderhk., vol. xxxix, p. 79.
10. Jürgensen: "Die Körperwärme des gesunden Menchen." Leipsig, 1873; also Deutsches Arch. f. klin. Med., iii, p. 165.
11. Fehling: Arch. f. Gyn., 1874, vol. vi, p. 385.
12. Forester: Jour. f. Kinderkr., 1862, No. 7.
13. Feis: Arch. f. Gyn., 1893, No. 3, p. 403.
14. Raudnitz: Zeitft. f. Biol., 1888; p. 545.

perature in children in whom the initial loss of weight ceased early.

A number of writers in their careful studies of the temperature in the newborn confirmed the observations of Forester[12] and Barensprung.[3] Eross[9] called special attention to the limits of normal temperature on the fourth and fifth days, and stated that from his observations a rise to 100 F. (37.8 C.) or 100.2 F. (37.9 C.) occurred during this time only under pathologic conditions.

Abnormal elevations of temperature are not uncommon in the first days of life, in some instances lasting several hours only, in many a few days, and in others persisting for two or three weeks or a longer time. The exact cause of them, where no gross pathologic lesion presents itself clinically, may at times be difficult to determine. Their frequently transient character and early disappearance after the establishment of lactation led Holt[15] and McLean to style some of them inanition temperatures. To say the least, this seems paradoxical and untenable in the light of the above observations, especially when we consider that starvation in infancy is invariably associated with subnormal temperature unless an infection is present.

Demme[16] observed that within the first half hour after nursing the rectal temperature dropped a few tenths of a degree and in the next sixty to ninety minutes it rose from 0.3 F. (0.2 C.) to 1.4 F. (0.8 C.) higher than before nursing, and in the next 30 to 60 minutes it declined to the temperature noted before nursing. The disappearance of febrile temperatures coincident with the establishment of free lactation probably depends on the rapid elimination of absorbed toxic products (possibly from the cord or from abraded or inflamed surfaces) incident to the increased quantities of fluids taken, or more probably on the action of antitoxins derived from the milk.

Some observers are inclined to associate many of the pyrexias with uric acid irritation of the kidneys or anuria. In the majority of the newborn uric-acid infarcts are formed in the uriniferous tubules in the first ten days. Flensburg[17] believes they are formed by a deposit of urate of ammonium around an albuminous exudate in the tubules. Schreiber[18] considers the exfoliated epithelium of the tubules analogous to the desquamation of the skin the basis of the casts. According to Horbaczewski, the excessive excretion of uric acid is due to the great increase in metabolism and destruction of leucocytes in the newborn. These infarcts are washed out by the pressure and solvent action of urine secreted higher up in the tubules. The condition is so common to the first days of life that it is considered physiologic. When the urine is diminished in quantity and concentrated as the result of a febrile disturbance or existing diarrhea it is evident that there might be a temporary or permanent suppression of urine, which must be regarded as secondary to and not the cause of pyrexia, as anuria ordinarily is not accompanied by a rise in temperature.

While elevations of temperature in infants may be produced by apparently slight causes, it was noted by Epstein[19] that in many instances newborn, who during life presented no elevation of temperature or even showed apyrexia, succumbed to extensive inflammation of serous membranes, an analogous condition to which is occasionally found in the afebrile and virulent septic peritonitis of the adult. This would seem to suggest that the infant reacts not unlike adults to infection of similar tissues, so far as temperature is concerned. Apyretic infections, however, are the exception, as they are almost invariably associated with fever.

In 1892, in his clinical report of the diseased conditions found in a thousand newborn infants in the Gebär Anstalt in Budapest, Eross[9] stated that elevation of temperature was present in 431 cases. In 51 per cent. of these he referred the temperature to putrefactive changes in the cord, or inflammatory processes in the navel. In many of the latter the changes remained localized; in others they gave rise to general sepsis. In 25 per cent. of the cases febrile temperature was associated with dyspepsia or catarrhal enteritis. In twenty-one cases the cause of pyrexia was referable to inflammation of serous membranes or the lungs. In seventy-nine cases the source of the temperature was not determinable, but he believed it was due to foci of infection he could not locate.

While the above observations showed an unusual large percentage of infants developing temperature in the first days of life, it is quite in keeping with the earlier observations of Epstein,[19] who, in 1885, stated that in the Prague Gebär Anstalt 30 per cent. of newborn died of sepsis before the introduction of antisepsis, and that thereafter it was reduced to 5 per cent.

In 1895 Eross[9] wrote that since the employment of rigid prophylactic measures the febrile conditions in the newborn had been reduced from 45 per cent. to 11.38 per cent. No stronger evidence than these latter statements could be deduced to show that febril temperatures in the first days of life are a manifestation of infection or toxemia, even though we are unable at times to trace its origin and that they are preventable to a great degree by appropriate prophylactic measures.

The opportunities for infection in the newborn in the birth canal, at birth and subsequent thereto, are numerous, to-wit: By the contact of infectious material with the eyes, its entrance into the mouth or nose, to be later swallowed or aspirated; the introduction of the unclean finger into the mouth, and abrasions of the mucosa, which Epstein[19] demonstrated was the starting point of Bednar's aphthæ, which he also stated was capable of giving rise to sepsis in the infant; traumas incident to forceps delivery or subsequent accident; contaminated environment and unclean attendant; the existence of an always possible focus of infection, namely, the navel, which Quinquaud,[20] in 1872, was the first to suggest as the port of entry for infectious material in sepsis neonatorum, which had previously been regarded as a condition that developed *in utero* or during birth in septic mothers. The fallacy of this latter theory was subsequently proven by Runge,[21] who reported epidemics of sepsis occurring in the newborn while the mothers remained healthy.

Although infection from the navel has been enormously reduced since the introduction of asepsis, Eross[9] entertained the view that it had not been lessened to the extent that puerperal infection had in the mother. While there is a tendency to disregard changes in the cord stump or navel as a very frequent cause of temperature in the newborn, it is well to bear in mind that in pre-antiseptic days sepsis developing from this source was re-

15. Holt: "Diseases of Infancy and Childhood," p. 119.
16. Demme: "Im 14 Bericht über das Jennersche Kinderspital in Bern," 1877.
17. Flensburg: Virchow's Jahrsbericht, 1895, No. 11, p. 207.
18. Schreiber: Zeitft. f. klin. Med., vol. xxxvii.
19. Epstein: Med. Wander-Vorträge. No. 3, Berlin, 188.
20. Quinquaud: Quoted from Epstein Med. Wander-Vorträge, No. 3, p. 9.
21. Runge: "Die Krankheiten der Neugeboren."

sponsible for a large proportion of the deaths occurring among them, and that strict asepsis, with regard to the infant, is not always adhered to at the present time. Clinical observation and subsequent anatomic examinations show that even slight and superficial inflammatory processes in the navel are sufficient to give rise to general infection.

Cholomogroff's[22] bacteriologic studies showed that in the proximal part of a cord stump that is undergoing moist gangrene, micro-organisms identical with those obtained from the lochia in puerperal sepsis, namely, streptococci and staphylococci, are found. He suggests that this renders possible the transfer of septic material from the cord stump of a healthy child to the infant itself or to the mother.

In the various infections that attack the newborn, depending on its character, different micro-organisms are found. The bacteria above mentioned are those usually found in sepsis neonatorum, whatever may be its clinical manifestations.

The nasal and oral cavities are no less important as portals for entry of infection in the newborn than at a later period of infancy and childhood, and as a consequence infection of the respiratory and gastrointestinal tracts is not uncommon. Infections of the respiratory organs are far less frequent, however, than those of the gastrointestinal tube. While many of the disorders of the latter are simply functional disturbances, and others are slight gastrointestinal catarrhs, some of them assume the form of what Epstein,[19] and later Fischl,[23] described as gastrointestinal sepsis. It is a well-known fact that sepsis in the newborn may run its course as a gastroenteritis, as a general sepsis or pyemia, following navel or other local infections, as Buhl's or Winckel's diseases, the septic nature of which is no longer doubted, or under the clinical picture of an hemorrhagic diathesis,

Gastrointestinal disturbances, however, may exist as an associate symptom-complex with almost any acute disease of infancy, and, unfortunately, at times for the infant, they may occupy the entire attention of the physician, and the primary affection may be overlooked. On the other hand, the gastrointestinal symptoms may attain such a degree as to render their treatment of paramount importance. This is no less true occasionally in renal insufficiency in infants.

The following cases occurring as a ward epidemic in the newborn, presented many points of interest that appeared worthy of reporting:

### CASE HISTORIES.

CASE 1.—S., an infant, born Feb. 9, 1905, after normal labor. Nothing unusual was noted in the child. He weighed six pounds one ounce. Meconium was passed freely and he urinated twice in the first twenty-four hours, at the end of which time the temperature was 99.8 F. (37.8 C.) It rose thereafter, reaching the maximum elevation on the fifth and sixth days of 105.6 F. (40.9 C.), and continued as a remittent fever during his stay of fifteen days in the hospital. He nursed indifferently, was restless and vomited occasionally. Bowel movements were frequent, greenish in color and contained considerable mucus.

*Examination.*—Examination on the fourth day revealed a small male infant, considerably emaciated and very drowsy. Head, eyes and face negative. Throat congested. Respiratory murmur harsh. Heart area not enlarged. No adventitious sounds. Liver palpable. The cord dressing was stained with a brownish discharge of fetid odor. Cord stump was soft and of greenish color.

Examination of mother failed to show anything abnormal. Lactation was established on the third day. Breasts well filled. No excoriations or fissures of the nipples. The infant was again examined on the sixth day, when the physical findings were found the same, and in addition there was a papulo-pustular eruption on the neck, chest and arms. It was also noted that he coughed and sneezed occasionally and there was at times a slight nasal discharge present. He lost weight rapidly, and at the end of eight days weighed twenty-one ounces less than his birth weight, and did not regain any while in the hospital. The cord dropped off on the thirteenth day. The navel was excoriated, reddened and moist, an umbilici catarrhalis of Runge.

CASE 2.—L., an infant, was born Feb. 15, 1905, after an uneventful labor. He appeared healthy and weighed five pounds and fifteen ounces. After receiving the usual attention he was placed in the same cot with infant in Case 1. His bowels moved regularly, but urine was not voided in the first forty-eight hours, after which time it passed freely.

At the end of the second day the temperature was 100.2 F. (37.9 C.), which continued to rise and persisted as a remittent fever for eighteen days. On the third day he weighed five pounds five and a half ounces, which he maintained until the disappearance of temperature. He was restless, slept little, coughed infrequently and nursed poorly. On the ninth day epistaxis occurred, and on the eleventh day there was considerable discharge from the nose.

*Examination.*—Physical examination gave practically the same results as noted in the infant in case 1, except no eruptions were present, and there was a loud systolic murmur heard over the cardiac area during the continuance of temperature, but disappeared thereafter. The cord, which apparently had undergone normal mummification, dropped off on the sixth day. With the subsidence of temperature, which had continued for seventeen days, all symptoms disappeared and he gained rapidly in weight. The mother pursued a normal course following labor and had an abundance of breast milk.

CASE 3.—L., an infant, was born Feb. 15, 1905, after a normal labor. He weighed eight pounds four ounces and did not present any abnormalities. He was assigned to the same cot with the above infants. The bowels moved two to four times in twenty-four hours.

First urination recorded was forty-four hours after birth, at which time the temperature was 100.8 F. (38.2 C.), and continued to rise, reaching a maximum of 104.4 F. (40.2 C.) on the fourth day and persisting as a remittent fever throughout. He urinated freely on the third and fourth days, but thereafter there was complete anuria for six days. At first he was restless, nursed little, coughed and sneezed at times and lost weight rapidly. Later he vomited; bowels moved frequently; he was very drowsy and moaned a great deal.

*Examination.*—Physical examination gave practically the same as found in the infant in case 1. The cord mummified in its distal portion, but the proximal part was moist, brownish in color, with a slight discharge at its base. It dropped off on the fifth day, leaving a moist, excoriated surface.

On the tenth day he had frequent short eclamptic seizures. There was a constant and marked longitudinal nystagmus. The head was slightly retracted and later the legs and arms were somewhat rigid. After an attack of vomiting he became suddenly cyanotic and died in a few minutes.

The mother had an uneventful convalescence and a good supply of milk.

CASE 4.—C., an infant, was born Feb. 18, 1905. He weighed six pounds and four ounces. There was a pressure paresis of the left facial present. He was placed in the same cot with the above infants. The nurse recorded a slight convulsion eleven hours after birth. At the end of thirty hours the temperature was 102 F. (38.9 C.) In forty-eight hours it was 106 F. (41.1 C) Up to this time meconium and urine were regularly voided.

He was restless and, as in the case of the other infants, he coughed and sneezed occasionally. During the fourth, fifth and sixth days he urinated but once in twenty-four hours. Thereafter, with the drop in temperature, frequent urinations were recorded. The cord changes were similar to those mentioned in case 3. It dropped off on the tenth day. The mother did not present anything abnormal.

22. Cholomogroff: Zeitft. f. Geb. u. Gyn., 1889, vol. xvi, p. 34.
23. Fischl: Jahrb. f. Kinderhk., vol. xxxvii, pp. 290-292.

Following are the findings of postmortem made by Dr. Bassoe on the infant in case 3:

Anatomic Diagnosis: 1, Acute rhinitis, pharyngitis, laryngitis, tracheitis and bronchitis; 2, uric acid infarctions in both kidneys; 3, catarrhal enteritis; 4, nodule in liver.

Examination: Weight, 2,450 gm.

There is a reddish discoloration of the skin, especially of the upper limbs. Slight excoriation about the umbilicus. The peritoneal cavity is empty. Rectum and sigmoid are distended with gas. Rest of intestine is not distended. The appendix is 6½ cm. long and bent on itself. Peritoneum is smooth throughout. Pleural and pericardial cavities are empty. Thymus is small. The pharynx contains very viscid whitish mucus. The posterior nares contain same kind of mucus. Mucous membrane of pharynx is hyperemic and smooth. No pus is found in sphenoidal or ethmoidal sinuses or in tympanic cavity. The larynx and trachea are filled with mucopus. On scraping off the mucus the membrane is smooth and very slightly hyperemic. The mucus is not blood-stained. Lungs are pink and crepitate throughout. Cut surfaces are smooth. Small amount of mucus can be expressed from the middle-sized bronchi. There are no visible areas of consolidation. Heart is proportionate in size and normal. Spleen measures 3½x2x1 cm. On section it is dark red and has a normal consistency. The tongue is smooth and has a normal appearance. Esophagus is smooth. The stomach is empty and contains small amount of mucus. Liver weighs 100 gm. Surface is smooth. There is some reddish discolorations on right lobe. Normal consistency on section. It is light grayish-red, in places pale red, lobular markings indistinct. On the surface of the left lobe is a yellowish-white, slightly raised area, 4 mm. in diameter. It extends 3 mm. into the interior, forming a globular nodule, sharply separated from surrounding tissue.

The gall bladder contains viscid bile. Kidneys of porportionate size. The capsule peels readily, leaving a smooth surface. All pyramids are of a grayish color. Urinary bladder is empty. Prostate is normal. Testicles are normal. The center of ossification in lower end of femur is 4 mm. in diameter. Line between bone and cartilage is regular.

Histology: Thyroid. Colloid very abundant, considering age of individual. In the bronchus were masses of red cells in which there are leucocytes adherent to the mucosa. The epithelium of the latter is well preserved; its vessels very hyperemic. In the lungs, septa were very hyperemic. Many alveoli are filled with red cells and leucocytes; most of them, however, remain open. No changes were noticed in the stomach and the intestine. There was considerable fatty degeneration in the liver. Urate deposits in tubules of pyramids, demonstrated in frozen sections, were found in the kidneys. On treating with H Cl, or acetic acid, uric acid crystals were formed.

Bacteriologic examination made by Dr. D. J. Davis gave the following:

The material examined bacteriologically was heart's blood, bile, cerebrospinal fluid, purulent masses from pharynx and bronchi. Heart's blood, bile and cerebrospinal fluid gave negative results.

Smears of the pharyngeal mucus showed a considerable number of an encapsulated Gram-staining diplococcus, evidently the pneumococcus, also a very large number of non-Gram cocci or diplococci, principally outside the leucocytes, though frequently within. Polynuclear leucocytes are very abundant. Smears of the bronchial mucus show the same organisms, but there are fewer pneumococci. Cultures were made on blood-agar plates from the pharynx and bronchus. Pneumococcus colonies were abundant, but far more numerous were colonies of micrococcus catarrhalis. On blood-agar the colonies of this organism are round, raised, grayish-blue, without a zone of hemolysis. It grows best on blood-agar or Loeffler's blood serum. In bouillon there is slight cloudiness at first, with formation of coarse granules, forming an abundant sediment in forty-eight hours. It does not change litmus milk and grows freely on potato. It is a non-Gram staining, small coccus, often in pairs and being frequently found in leucocytes is easily mistaken for the meningococcus. The amount of 5 c.c. of a twenty-four-hour bouillon culture was inoculated into the pleural cavity of a guinea-pig weighing 380 gm. The pig remained perfectly well, the culture apparently having no effect.

The postmortem did not show any important local changes in the navel nor an endarteritis or phlebitis of the umbilical vessels, there being noted only superficial excoriations, although during life the cord had not mummified normally and there was a brownish fetid discharge present. The bacteriologic examination of the blood, bile and cerebrospinal fluid was negative. All the clinical manifestations were, therefore, plainly referable to infection of the respiratory tract and to anuria incident to extensive uric-acid infarctions of both kidneys.

The little patients presented many points of clinical interest. They demonstrated the susceptibility of the newborn to infection of the air passages. They illustrated the rapidity of conveyance and the briefness of incubation in infection with the micrococcus catarrhalis and pneumococcus, likewise its tenacity and seriousness in the newborn. They suggested the contagiousness of what ordinarily might be termed a "cold" and gave color to the time-honored maternal observation that the "baby was born with a cold."

### ETIOLOGY.

The original source of infection in these cases was not determinable. Gaertner[24] reported an epidemic of pneumonia in eight newborn in the Heidelberg Gebär Anstalt, caused by staphylococci and streptococci, which micro-organisms he was able to cultivate from the mattresses of the lying-in patients. This latter investigation does not, however, seem convincing.

Children born in the ward subsequent to my last reported case and kept in a different room did not develop temperature or evidence of disease, whereas all infants placed in contact with Case 1 and subsequent cases developed same.

The clinical symptoms presented considerable uniformity in all cases, but nothing characteristic. At times they were restless and slept little; at other times drowsy and not easily awakened. They coughed and sneezed, but infrequently, and neither could be regarded as a prominent symptom. There was a slight nasal discharge in two cases, one having epistaxis. They nursed poorly, vomited occasionally, and the bowel movement was somewhat frequent, sometimes green, and contained, on and off, mucus and curds. The urine often showed brick dust deposits. The temperature was high, remittent in character, and in the cases that recovered declined slowly to lysis.

Physical examination showed evidence of an acute rhinitis and pharyngitis. The respiratory murmur was harsh, otherwise negative. Respirations were somewhat accelerated. In two cases there were skin eruptions on neck, chest and extremities; in one papulo-pustular; in the other petechial.

Regarding the secretion of urine in these cases, it will be noted that the infant in Case 3 urinated freely for the first four days, when the temperature reached 104.4 F. (40.2 C.), after which time there was anuria for six days, when he succumbed, evidently to uremia. In this patient, as a result of the infection with accompanying temperature and diarrhea, the urine being concentrated and small in amount, was insufficient to force out or dissolve, as previously mentioned, the infarctions already formed, and instead contributed to increasing them by further deposits of urate of ammonium, the water being absorbed. Anuria resulted, leading subsequently to, in all probability, uremic poisoning.

It would seem that urinary suppression in the newborn

24. Gaertner: Quoted from Fischl in Jahrb. f. Kinderhk., vol. xxxiii, p. 289.

when associated with temperature is a result of the concentration of the urine incident to the cause of the latter, or a co-existing diarrhea, and to uric-acid infarcts in the kidneys, rather than that the temperature is due to the latter. It is hardly necessary to mention that this presupposes a normal anatomic status of the urinary tract.

TREATMENT.

The treatment of infections of the respiratory tract and all other infections in the newborn rests primarily in prophylaxis, a strict observance of asepsis and protection against infection of the infant while in the birth canal, at delivery, and subsequent thereto. The oft-repeated admonition of antiseptic douching at the onset of labor in case of suspected gonorrheal infection in the mother and the immediate care of the eyes by Credé's method ever holds good for the prevention of ophthalmia neonatorum. The douching also removes bacteria that are commonly found in the vaginal secretion and which, according to Kneise, are always present in the mouth of the newborn. The opinion was early expressed by Epstein[19] that contaminated amniotic fluid might be responsible in some instances for infection of the respiratory and gastrointestinal tracts in the newborn, and suggested the necessity of avoiding frequent examination after the rupture of the bag of waters. It is probable, however, that the pathogenic organisms of the vaginal bacterial flora which may be virulent would better explain such infections.

Of vital importance to the infant is the treatment of the cord, for which many methods have been advocated, some of which have been quite radical because of unfortunate occurrences. Because of an experience with tetanus in the newborn, Martin[25] advised cutting the cord after ligation with red-hot scissors. Dickinson[26] recommends excising the cord entirely, ligating the umbilical vessels, and suturing the skin over them, claiming that the sloughing process at the child's navel is not consistent with asepsis in child-bed. While a moist gangrene of the cord may not be, a normal mummification of the cord can not carry any such dangers.

Occlusive dressings have also been used, but Runge[21] long ago demonstrated that such a method delayed separation of the stump, which remained moist and fetid. An hygroscopic dressing of plaster-of-paris is also practiced, and Cholomogroff,[22] from his bacteriologic investigations, believed that it possessed advantages over other methods. Whatever be the method used, asepsis should characterize its treatment as thoroughly as the stump of an ovariotomy.

When an infection of the respiratory tract or any other organ or tissue develops in a newborn babe in a maternity ward it is evident from the above cases that it should be isolated, and that a nurse attending it should neither attend uninfected mothers nor children. Winckel stated that the same nurse should not at any time care for both mother and child. Where it is not practical to carry out Winckel's plan the infant should receive first care. There is little doubt that some infections in children may be conveyed through the medium of the attendant. In fact, as Kehrer[27] urged, the infant should not share the bed of its mother, nor, as might be added, the bed of other newborn, for obvious reasons. The infant should be protected against infections, acute or chronic, of the respiratory tract of the mother or nurse It is not improbable that the first infected of the above children acquired the same from the mother or the attendant.

Reich[28] reported instances of direct conveyance of tubercular infection by a midwife who was accustomed to blow into the nose of the infant to establish respiration after she had aspirated mucus from the oral cavity of the child, by aspirating directly with her mouth. Ten children so treated died within fourteen months from tubercular meningitis, although their heredity was negative. Later the midwife herself died from pulmonary tuberculosis.

The immediate care of the affected infant must necessarily be symptomatic.

In the above patients the temperature and restlessness were combated by sponging and bathing. The gastrointestinal symptoms were treated when the stools showed undigested material, by diluting the breast milk by the administration of sterile water before nursing, and in case vomiting was present, by prolonging the interval of nursing and giving lime water at that time. Enteroclysis was employed, also small doses of calomel, 1/40 gr., or castor oil.

To overcome the tendency to anuria, water was given frequently, and, at times, small doses of potassium citrate. The most effective measure in this regard, in addition to increasing fluids consumed, is the use of high rectal enemas of salt solution or sodium bicarbonate to be retained. They were given at six-hour intervals, about two ounces being used.

Concerning the immediate treatment of the respiratory tract, the nares were swabbed three or four times daily with boric acid solution. No expectorants were given because of the probability of increasing gastric disturbance.

25. Martin: Zeitft. f. Geb. u. Gyn., 1900, 42, S. 593.
26. Dickinson: Amer. Jour. Obs., 1899, vol. xl, p. 14.
27. Kehrer: Beiträge z. vergleichenden u. experimentellen Geburtsh., No. 4, p. 35.
28. Reich: Berl. klin. Wochft., No. 37, 1878.

## AN OPERATION FOR PYOSALPINX WITHOUT LIGATURE, CLAMP, ARTERY FORCEPS OR BLEEDING, BY OVERTHROW PROVISIONAL SUTURE METHOD.

REPORT OF FIFTY-NINE CASES WITH ONE DEATH.

W. D. KELLY, M.D., PH.G.

ST. PAUL, MINN.

(*Concluded from page 1017.*)

CASE 17.—R. D., aged 19, single, was admitted to hospital Aug. 1, 1903.

*History.*—The patient had diphtheria, when a child, influenza and scarlet fever; had gonorrhea about four years ago; at the same time had four sores on labia; she was told they were chancres; had been taking blood medicine for two years; says she was cured of gonorrhea two years ago, and contracted it again for the second time and was cured; says she was rachitic when a child.

*Diagnosis.*—Right-sided pyosalpinx; appendicitis.

*Operation.*—Single salpingo-oöphorectomy, appendectomy. The right ovary, right tube and vermiform appendix were found to be bound together with firm peritoneal and omental adhesions; a large band of omentum ran across from the anterior abdominal wall to the fundus uteri. The adhesions were broken up with difficulty. The right tube and ovary were isolated, but in lifting up the tube it ruptured and pus escaped. The opening in the tube was clamped and the tube and ovary (right) removed by making a short incision in the broad ligament and whipping over the uterine edge of the ligament with Billroth's chain suture, proceeding in this way, cutting and tying, until the tube and ovary were almost removed. They were then raised up and slightly drawn on, so as to form a

pedicle, which was tied off with pyoktannin catgut, No. 3. The apex of the appendix was freed of adhesions, seized with artery forceps and raised up; the remainder of the appendix was freed and double ligated with catgut and removed by cutting between two ligatures. The peritoneal flap was closed with fine catgut suture. The patient was discharged, well, Sept. 29, 1902.

CASE 18.—L. A., aged 54, a widow, was admitted to the hospital Aug. 5, 1903.

*History.*—The present trouble began three weeks ago with chills and vomiting. She had very severe pain in left side, which was very tender. She had chills three successive days; she went to bed, but got no better. After about ten days she began to have a discharge from the uterus. The pain still kept up and the discharge was very offensive and yellow in color. This discharge gradually ceased and she suffers less pain.

*Diagnosis.*—Pelvic inflammation, pyosalpinx (left).

*Operation.*— Salpingo-oöphorectomy. An incision was made in the median line, about five inches long between the umbilicus and the pubes. It was necessary to make such an incision on account of the belly wall. Numerous adhesions were found between intestines and omentum. These were broken up with the fingers and the appendix was exposed; this structure was normal. The ovaries and tubes were found to contain abscesses. Adhesions were found to anterior abdominal wall, and several large adherent portions of omentum were tied off and excised. A broad ligament hemorrhage on the left side was found. A partially organized clot was found about the size of a hen's egg; it was shelled out, and a cyst of the same size was opened. A continuous over-and-over suture was employed, and the ovaries and tubes were removed with very little hemorrhage. The cavity was swabbed out so as to free it from blood clots and other foreign substances; the peritoneum was sutured with pyoktannin catgut No. 2; also the fascia of the rectus muscle. The skin was sutured with silkworm gut, a dry dressing was put over the wound and the patient sent to bed in good condition, but died Aug. 16, 1903.

CASE 19.—F. S., aged 19, single, was admitted to hospital Aug. 18, 1903.

*Diagnosis.*—Pyosalpinx, cystic ovary, appendicitis.

*Operation.*—Laparotomy: salpingo-oöphorectomy, appendectomy. An incision was made in the median line between the umbilicus and the pubes, about four inches in length, down to the peritoneum, which was grasped with two pairs of dressing forceps and lifted up and cut. The ovaries, tubes and appendix were then explored; the fundus of the uterus was found in Douglas' cul-de-sac. Some adhesions were found also and a pus tube and an ovary which had a few small cysts on the surface. The left tube and ovary were taken out, the broad ligament being sutured. An extra tube abscess was opened during the operation and pus escaped, which was wiped away by sponge. All adhesions were broken up and appendix removed. A cuff was dissected and the appendix ligated, cut off and touched with 95 per cent. carbolic acid, followed by alcohol. The cuff of peritoneum was closed over the end and the whole inverted. A ventral suspension was performed, two pyoktannin, No. 2, catgut sutures were placed through the peritoneum and through the posterior portion of the fundus of the uterus and tied; the intestines were carefully mopped and the peritoneum was closed by continuous suture of No. 2 catgut. Muscles and fascia were then sutured with same suture and the skin closed by subcuticular stitch of silkworm gut. Patient was discharged, well, Sept. 23, 1903.

CASE 20.—Mrs. H., aged 35, admitted to hospital April 1, 1904.

*History.*—The patient has had several attacks of gonorrhea. She complained of pain in the right and left lower quadrants of abdomen and of pain in back. Temperature, 100; pulse, 105. She had constipation, headache and furred tongue, offensive leucorrhea discharge.

*Diagnosis.*—Lacerated cervix; inflammation of uterus and a large retroflexed uterus fixed posteriorly; large packet found on both sides of uterus; considerable pain and tenderness in pelvic region.

*Operation.*—Salpingo oöphorectomy. The abdomen was opened in the median line with the patient in the Trendelenburg position. Bowel, omentum and rectal adhesions were cut away and tied. Adhesions of bowel were separated and bowel and omentum allowed to drop back from site of operation. A large piece of gauze was inserted for drainage. Pelvic peritonitis was present. The tubes were freed, and the ovarian and uterine arteries were tied on the left side. On attempting to separate the tube from its attachment to the broad ligament, the ligature slipped from the ovarian artery and the profuse bleeding was stopped with difficulty. The bleeding artery after ligating was cauterized. There was considerable oozing from freed adhesions. The broad ligament was stitched and an attempt was made to cover raw surfaces with peritoneum. The patient suffered slightly from shock, but otherwise made an uneventful recovery, leaving the hospital on the nineteenth day after the operation.

CASE 21.—Mrs. W., German, aged 27, admitted to hospital April 1, 1904.

*History.*—Patient has no children; she has had no abortion; no gonorrhea. She is thin and anemic. She complained of a dragging pain in her left inguinal region. She had typical hysterical crouch and expression of face, with position of palsied hand when attempt is made to examine side. This paient was pronounced a confirmed hysteric. There was a tough, light-colored, stringy, tenacious discharge from the cervix. She was constipated. Temperature was 99.6; pulse, 96. She complained of headache and general malaise. She has had repeated attacks of pain in right side.

*Diagnosis.*—The patient was examined with much difficulty. I found the uterus deflected to the left side, somewhat fixed laterally on the right side. I made a diagnosis of retroverted uterus. A large mass was felt through the abdominal wall, which wall was thin.

*Operation.*—Oöphoro-salpingectomy. The adhesions on the right side were very dense. The omentum was separated and an inflamed mass was found, a portion of which crossed the pelvis. Its middle portion and distal end were adherent, respectively, to the tube and to the posterior wall of the uterus. After tying and freeing the appendix it was removed (cuff method). The tube and ovary were removed by clamping and cutting below tube, then following up cut surface by running suture and tying off the tube at the horn. In the left broad ligament a large organized clot, the size of a goose egg, was found. The ligament was split and the clot removed, after which the ligament was closed with running suture. Patient was discharged, well, April 24, 1904.

CASE 22.—Mrs. M., admitted to hospital July 15, 1904.

*Diagnosis.*—Left pyosalpinx.

*Operation.*—A median incision, three inches long, was made between the umbilicus and the pubes with the patient in the Trendelenburg position. The intestines were packed back. There were adhesions between the left tube and the sigmoid. The left tube was coiled around the left ovary, which was normal. When the bowel was torn from the adhesions, pus appeared, which was sponged away. No. 2 pyoktannin catgut was used for provisional sutures in stump of broad ligament, as the tube was cut away. On section of removed tube pus in considerable quantity was found in the lumen of the tube. In removal of the tube part of ovary was also removed. The other tube and ovary, as well as the appendix, were normal. The peritoneum was sutured with No. 2 pyoktannin catgut; the fascia with No. 3 pyoktannin catgut, and the skin with a subcuticular suture of silkworm gut. A dry dressing was applied. Patient made a good recovery from the anesthesia. Pain was severe. The temperature varied from 99 to 101.4, which was the highest until she was discharged, August 3, thoroughly recovered.

CASE 23.—M. R., aged 19, white, clerk.

*History.*—She has always enjoyed good health. The present trouble dates back two weeks. It began with constant, sharp pain in right iliac region, which disappeared in a few days and then returned in left side. Menstruation began at 13 and was regular until one year ago; it was always profuse, lasting about two days. Menses were accompanied by pain and back-

ache. During past year menstruation has been irregular and attended with sharp pain, compelling patient to go to bed.

*Examination.*—Patient was well developed and had good color. Lungs and heart were normal. Pulse was regular, but fast (120). In the lower part of the abdomen and extending to one inch below the umbilicus a large mass could be felt. It was firm on palpation, dull on percussion and very painful and tender on pressure. The left side was more tender and painful than the right.

*Diagnosis.*—Gonorrhea, endometritis and double pyosalpinx.

*Operation.*—June 28, 1904, a median incision was made. The right ovary and tube were adherent. The adhesions were broken up and the broad ligament ligated by a continuous suture. The tube was removed; it was enlarged and inflamed. A number of cysts were found in the mesentery and about the left tube and ovary. The patient was discharged well July 14, 1904.

CASE 24.—Mrs. F. P., aged 32, white, housewife, admitted to hospital June 4, 1904.

*History.*—The patient has had three children, the oldest is now 14, and the youngest 8 years old. In February, 1904, the patient had an attack of pain in the lower right quadrant of the abdomen. This was accompanied with vomiting and fever. About three weeks before admission to the hospital she was again seized with pain in the lower right abdomen, accompanied by fever. Attempts at vomiting were painful.

*Examination.*—The patient was well nourished, with a good color. Her eyes were clear and bright; the tongue was slightly coated. Lungs and heart were normal. The abdomen was tender on palpation and the percussion note on the right side was dull. An abscess could be palpated filling the lower right pelvis and extending as high as McBurney's point and an inch to the left side of the median line.. Urine examination was negative.

*Diagnosis.*—Double pyosalpinx.

*Operation.*—June 7, 1904, an incision was made in the median line. Adhesions were found involving the peritoneum, omentum, intestines, ovaries, tubes and bladder. Those involving the intestines were broken up. A mass was found on the right side, involving ovary, tube and omentum and adherent to the upper posterior part of bladder. This mass was removed after a partial removal of pus from the tube by aspiration. The puncture was closed with forceps and no pus escaped. The broad ligament was sewed up by an over suture, and part of the ovary was stitched to the right cornu of the uterus. The omentum was ligated and cut from adhesion. Right and left extra tubal abscesses were opened. The broad ligament was adherent to the upper part of the uterus and a portion of the rectum, and in breaking these adhesions the peritoneum was pulled from the uterus, leaving it bare. Stitches were taken, bringing the peritoneum from before backward and from below upward and forward, covering the bare upper portion. Left ovary and pus tube were removed without rupture, and the incision was closed. The patient was discharged well, Aug. 11, 1904.

CASE 25.—B. M., aged 21, white, American, domestic, admitted to hospital May 27, 1904.

*History.*—When the patient was 16 she had an attack of cramps in abdomen, accompanied with vomiting, and pain on the right side. Last February she had a great deal of pain in the right side, though it did not confine her to bed. On Monday previous to admission to hospital, about 10 a. m., the patient complained of pain in the abdomen and on the right side. Bowels have moved fairly regularly.

*Examination.*—Patient is well nourished; her color is sallow; eyes yellow tinged; tongue slightly coated. Lungs and heart are normal. Pulse is strong and full, but rapid (100). Abdomen was tense, and she complained of pain on palpation over the umbilicus and on the right and left sides. Percussion note showed no tumor on the right. Deep palpation in the right iliac region caused pain. Temperature 101. There was no rash on the body. Urine examination was negative.

*Diagnosis.*—Double pyosalpinx.

*Operation.*—A large pyosalpinx was found on both sides, firmly adherent to adjacent parts. On breaking up adhesions on the left side, the sac was ruptured and the pus escaped into the peritoneal cavity, which was wiped out carefully, the intestines having previously been walled off, by sponges. The left tube and ovary were excised and a chain suture inserted to ligate the broad ligament. An abscess on right side ruptured in freeing adhesions, and the pus carefully wiped out. The right ovary was normal and was left *in situ*. The right tube was excised. Both tubes had become adherent to the sigmoid, and after removal two large denuded areas were sutured over by continuous suture, bringing the peritoneum over the sigmoid. On July 14, 1904, an appendiceal abscess was diagnosed and on July 16 the patient was operated on. She was discharged, well, Aug. 10, 1904.

CASE 26.—M. W., aged 18, white, American, domestic, admitted to hospital May 7, 1904.

*History.*—Patient complained of pain in abdomen and low in pelvis, on both sides for about two weeks. She had a temperature of 101.2 on admittance to the hospital. She denied having a vaginal discharge, but later admitted that she had. She has some pain and burning on urination. There is no history of syphilis.

*Examination.*—Patient is well nourished, strong and healthy. Her color is good, eyes clear and bright, tongue coated. Cervical glands are not enlarged. Heart is regular and strong, and lungs normal. There was no rash on the body. There was tenderness on palpation, low in pelvis, on both sides. Albumin was present in the urine.

*Diagnosis.*—Right pyosalpinx, gonorrhea, inguinal bubo.

*Operation.*—May 18, 1904. Large right-sided pus tube was adherent to intestines and down in cul-de-sac. It was freed by dry dissection, excised and stump overcast with catgut sutures, a buttonhole stitch covering in abraded surfaces. Pelvis was sponged dry and peritoneum closed. Patient left table in good condition. Recovery was uneventful, and the patient was discharged June 18, 1904.

CASE 28.—L H., aged 23, white, admitted to hospital June 17, 1904.

*Diagnosis.*—Double pyosalpinx.

*Operation.*—June 17, a median incision was made. Tubes and ovaries were adherent to surrounding tissues. The right Fallopian tube and ovary were first loosened, and in so doing an extratubal abscess was perforated and the pus escaped into the peritoneal cavity, which had previously been walled off with sponges. The pus was mopped out. The ovary and tube were removed and the broad ligament sutured by continuous suture. In breaking up adhesions on the left side, another extratubal abscess was ruptured, the pus being sponged out. The tube and ovary were removed and the broad ligament treated as on opposite side. The appendix was sought for and found involved. It was removed and the abdomen closed Patient was discharged, well, July 30, 1904.

CASE 29.—Mrs. C. A. S., aged 30, white, American, housewife, admitted to hospital April 5, 1905.

*History.*—Patient had measles as a child, diphtheria at 11, typhoid three years ago and smallpox two years ago. Menses began at 15 and are regular. She has four children, the oldest 8 and the youngest 5 years old. She had a miscarriage last fall, fetus 6 weeks old. She was operated on for pelvic abscess last September. She has been sick for the last month, with pain in the left inguinal region and pain in the left leg. She has had a leucorrheal discharge for same length of time. She was in bed first and has been unable to do any work. Bowels are regular, but appetite is poor.

*Examination.*—Patient is fairly nourished, but anemic. Tongue is clean. Eyes, chest, lungs and heart are normal. Breasts almost absent. She states that they began to disappear after typhoid. She had twins 14 months old, who were still at breast at that time. There was tenderness over the left inguinal region and a mass was palpable. Urine examination was negative.

*Diagnosis.*—Double pyosalpinx.

*Operation.*—April 11, 1905. A median incision was made. The entire contents of the pelvis, including bladder, both tubes and ovaries, intestines and omentum, were adherent. These were carefully separated by means of blunt dissection. The fimbriated end of the right tube was adherent to the ovary

and there was a small abscess in between. The right ovary and tube were removed by separating them from the broad ligament by scissors and the edges of the ligament were united by continuous overstitch of catgut. An incision through the peritoneum was made in each side and the same suture continued through horn and tube. On the left side the adhesions were more complicated and involved large portions of intestines. This was all separated by blunt dissection. In one place a rather deep hole was left in the intestine from adhesions, but edges of it were stitched over. The tube and ovary were separated in the same manner as on the right side, but the tissues were so friable that they tore several times. A saline enema was given to see if there was any intestinal leakage; none was found. The abdomen was mopped out, and the peritoneum brought together by a single mattress suture above and an overstitch for the rest. Fascia and muscle were united by another overstitch, taking in line of suture peritoneum. Skin was closed. The external wound was treated by the open method. On April 15 there was a foul odor and a discharge from the vagina. On April 20 there was a profuse discharge from the abdominal wound and four ounces of pus were expressed. The opening in the bowel was searched for and found. After the bleeding was controlled, the edges of the bowel were resected, a Murphy button introduced, the parts brought together and the bowel sutured. At the time of making this report the patient is still in the hospital.

CASE 30.—A. B., aged 22, married, was admitted to hospital April 2, 1904.

*History.*—The patient had smallpox when 3 years old and "inflammation of bowels" when 21 years old. She is married, but has no children. A week previously was seized with pain in the abdomen, vomiting and general distress. She has had profuse offensive yellowish discharge from the vagina for three weeks, and is still very tender over abdominal region. She is constipated a great deal of the time.

*Diagnosis.*—Double pyosalpinx.

*Operation.*—Double salpingo-oöphorectomy. An incision was made in the median line, about four inches long. Both tubes were seen to be adherent and greatly enlarged; a very superficial abscess could be seen in the left tube. The left tube was freed from adhesion, and in so doing an extra tubal abscess was opened, considerable pus escaping. The tube and ovary were removed and the broad ligament sutured. The right tube and ovary were freed from adhesions, another extra tubal abscess opened. They were removed in the same manner as the left. The appendix was examined and found normal, so was left alone. The pelvic cavity was sponged out. The peritoneum was closed with No. 2 pyoktannin catgut. The same suture and stitch closed muscle and fascia. A subcuticular silkworm gut suture closed skin opening. The patient made an uneventful recovery and was discharged May 20, 1904.

CASE 31.—C. S., aged 22, single, was admitted to hospital April 23, 1904.

*History.*—The patient has been troubled with constipation and some headache. About five weeks ago she had pain in the stomach and pelvis. She has not vomited, but her appetite is poor and she feels distressed after eating. She has a discharge from the vagina of about five weeks standing and complains of pain in the back. She does not sleep well, and has menstruated three times in six weeks.

*Diagnosis.*—Pyosalpinx (left).

*Operation.*—Single salpingo-oöphorectomy, appendectomy. A median incision was made about four inches long. Intestines, bladder, tubes and uterus were found to be adherent; adhesions were broken up by dry diasection, using sponge on finger. Right tube was freed and examined; it was somewhat distended. It was aspirated, but no fluid was found.. The appendix was found deep in the pelvis; it was freed and brought up. The serous coat was stripped off, forming a cuff. The mesoappendix was cut away and overcast with running suture of No. 2 catgut pyoktannin. The appendix was then clamped and cut off; the stump was cauterized with 95 per cent. carbolic acid, followed by alcohol, turned in and purse-string suture put around cuff and drawn tight. The left tube was much enlarged and firmly adherent, deep in cul-de-sac. In freeing the tube an extra tubal abscess was opened, allowing a fluid to escape; this was sponged away. The fimbriated extremity was brought out and the ovary and tube cut away, small cuts being taken and each one followed by overcasting with running buttonhole stitch. Skin was closed with subcutaneous stitch of silkworm gut. The patient was given an enema of warm oil and whisky. Recovery was uneventful, and the patient was discharged May 23, 1904.

CASE 32.—G. R., aged 24, white, American, was admitted to hospital June 2, 1905.

*Diagnosis.*—Double pyosalpinx.

*Operation.*—June 3, 1905. A median incision was made. The left tube was found much diseased and swollen; it was very thick and distorted and contained an abscess which was broken in attempting its removal. The tube and ovary were removed with scissors and the ligament caught up with suture. When the fundus of the uterus was reached the sutures were continued to approximate the edges after excision of a small fibroid. The right tube and ovary were found diseased, but contained no pus; they were removed in the same way. Abdomen was closed. The abdominal wound was closed with a modified open method. Two pieces of gauze were applied on either side of the wound and only oxid of zinc strips applied. The patient was discharged well June 21, 1905.

CASE 33.—Mrs. M. S., aged 34, white, American, clerk, was admitted to hospital April 25.

*History.*—Patient has always had good health. She has had one miscarriage. Menses began at 12 years; regular. Seven weeks ago she began to have a yellowish discharge from vagina and shortly afterward began to have pain in the pelvic region. She refused operation at this time. She did not have menses during March, but did in April. She came to hospital on April 25, 1905, for operation.

*Examination.*—Patient is poorly nourished and anemic. Tongue is clear. Eyes, chest and lungs are normal. Heart gives systolic apical murmur, and second pulmonic sound is accentuated; murmur is transmitted to axilla. There is tenderness over the region of the ovaries; abdominal muscles are rigid. Urine examination was negative.

*Diagnosis.*—Double salpingo-oöphoritis.

*Operation.*—April 28, 1905. A median incision was made. The omentum was adherent to the bladder and the adjoining organs and was separated by digital dissection. The right tube was thickened and tortuous, and the ovary had a large cyst, which was ruptured in trying to remove it. The tube was severed from the broad ligament by scissors and the ligament caught up by suture from fimbriated end to horn and the tube removed. The left tube was also much thickened and tortuous and there was an abscess at the distal end which was opened in freeing adhesion. The tube and ovary were removed in the same manner as on opposite side. On the posterior surface of the uterus there was a small pedunculated fibroid, showing cystic degeneration. This was cut off and the raw surface stitched over. The appendix being involved in the inflammatory catarrhal action, was removed, and the abdomen closed. An ether mask was applied over abdominal wound and held in place by two strips of rubber plaster. It was removed on the sixth day and the wound was found completely closed, subcuticular stitch was removed, and two pieces of gauze applied on either side of the wound, held in place by rubber adhesive strip. On eleventh day the wound was entirely healed. Patient was discharged, well, May 22, 1905.

CASE 34.—N. W., aged 18, white, American, saleswoman, was admitted to hospital May 29.

*History.*—Menses began at 12. As a rule, the flow was irregular, both in time and number of days; rather painful, but not severe enough to compel patient to remain in bed. Loss of blood was excessive. Last menstruation was on Thursday preceding admission, but only of 1½days' duration. Full term pregnancy four years before. The present trouble began a week before admission with pains in back and in lower left quadrant of abdomen. Patient has had vomiting, loose bowel and headache for past few days.

*Examination.*—Patient is well nourished. Her color is good; mental condition good; eyes are bright; tongue is coated.

Breasts are well developed and firm. Abdomen is flabby and shows old scars of pregnancy, but there is no abnormality in outline. There is some tenderness over McBurney's point, but not in right inguinal region. Abdomen on right side is soft. On left side there is distinct firmness over left quadrant low down and it is tender on pressure. Both areas are tender on pressure and painful. She has a vaginal discharge.

*Diagnosis.*—Salpingitis (left).

*Operation.*—June 1, 1905, a median incision was made. Intestines were pushed aside and kept there by sponges. The left tube and ovary were much inflamed, distorted and adherent. The adhesions were all broken up and the tube and ovary removed by beginning at end and cutting them away with scissors. Broad ligament was caught up by suture to control the hemorrhage. After carefully wiping out the peritoneal cavity the right tube and ovary were examined and found somewhat inflamed, but were not removed. Abdomen was closed. Abdominal wound was treated with two strips of gauze on either side of incision, held in place by adhesive strips. Patient was discharged, well, July 3, 1905.

CASE 35.—Mrs. P., aged 38, white, German, housewife, was admitted to hospital June 9, 1905.

*History.*—She complains of pain in the lower part of the abdomen and weakness of legs. She has been unable to do her work for some time because of the weakness. There is a feeling of fullness in throat. She has a white vaginal discharge. She was troubled similarly two years ago and came to the hospital and was operated on. A ventral fixation was done, and the right tube and ovary were removed. Recently the trouble returned. Family history was not obtainable.

*Examination.*—Patient is a large fat woman, with good color and well nourished. There is a scar on abdomen from previous operation. Heart, lungs and abdomen normal. There is a leucorrheal discharge. Urine examination was negative.

*Diagnosis.*—Pyosalpinx (left).

*Operation.*—June 10, 1905, a median incision was made. The operation was difficult on account of thickness of abdominal wall. The left tube and ovary were removed by cuting the tube from broad ligament with scissors and suturing the broad ligament as the incision proceeded. There was little pus, if any in the tube, but tube and ovary were prolapsed and adherent in the cul-de-sac; there were also adhesions in this region. The tube was ruptured in removal and the ovary was removed in pieces. Hemorrhage was controlled by sutures. A tear in the peritoneum over the sigmoid was closed with Lembert sutures, abdomen closed and external wound treated by modified open method. Patient was discharged well July 6, 1905.

I have selected 35 out of 59 most interesting and complicated of my cases which I have taken from the different hospital records. The time allotted to me will not permit of my reporting all the cases in detail. In 24 which I report, but not in detail, the patients made uneventful recoveries and were discharged well.

### DEDUCTIONS.

The most frequent causes of pyosalpinx are abortion and gonorrhea.

Pyosalpinx occurs most frequently between the ages of 16 and 40.

My mortality from operation is less than that from measles, being under 2 per cent.

It occurs, in the great majority of cases, either in the ampulla or distal end of the tube.

It is complicated very frequently with appendicitis.

In the majority of cases, it is accompanied by cystic ovary.

It is comparatively easy to differentiate from appendicitis.

It almost always is accompanied by a pelvic or general peritonitis.

The tube seldom, if ever, ruptures.

The operation, as described by me, is almost bloodless and can be performed without the use of ligatures or artery forceps.

Drainage is almost never necessary.

Counter openings should not be made.

Extratubal or peritubal abscess is frequently found, in which the walls are made up of bowel, or omentum, tube, broad ligament, sigmoid, uterus, or bands of adhesions. This condition is frequently mistaken for rupture or abscess of ovary or tube, as it is impossible to separate or to encroach on this abscess without opening it.

---

## THE STATE OF NEW JERSEY VERSUS GEORGE H. WOOD.

### A REVIEW OF THE EVIDENCE AND OF THE THEORIES AVAILABLE FOR THE DEFENSE.*

PEARCE BAILEY, M.D.
Consulting Physician to the Manhattan State Hospital.
NEW YORK CITY.

On Feb. 2, 1905, about noon, George Williams, a grocer of Watchung, N. J., was found in his sleigh, shot through the back, on a lonely part of the road between Watchung and Warrenville (near Plainfield), N. J.

When last seen alive, Williams was in the sleigh with George H. Wood, the latter having hired Williams to take him from Watchung to Mt. Horeb. There was no apparent motive for the crime, Wood and Williams never having met until the fatal morning and no attempt at robbery had been made. Wood was tried for murder in the first degree at Somerville, N. J., May 15-19, 1905, before the Hon. A. G. Garretson and a jury. The defendant pleaded "not guilty," advancing as his defense that he had no clear recollection of anything between the dates of Jan. 30, 1905, at noon, and Feb. 5, 1905, when he awoke in the city prison of New York.

Such a defense, in face of the fact that many witnesses had met and talked with Wood in and about Plainfield, both on the day of the murder and for several days previously, and had noticed nothing peculiar about him, marked the case from the outset as out of the ordinary. It was circumstantially proved, with almost absolute certainty, that Wood killed Williams.

To explain the period of automatism with amnesia, alleged by Wood, several hypotheses were advanced by the experts called in his behalf, all of whom testified that Wood was irresponsible or insane at the time of the commission of the crime. These hypotheses were not accepted by the state's medical witnesses, and it was the general opinion that, had the case gone to the jury, the defendant would have been found guilty.

The defendant's counsel realized this, and at the same time the prosecutor, in view of the impossibility of showing strong motive, recognized that there was sufficient doubt as to the defendant's mental balance to justify a lesser verdict than death. Consequently, at the end of the trial, after consultation between counsel of the two sides and the presiding judge, the original indictment was withdrawn, the defendant pleaded guilty to murder in the second degree and was sentenced to thirty years at hard labor in the penitentiary, the maximum penalty.

The whole interest in the case centered in the story told by Wood. He told and retold it to many persons before the trial, he told it at the trial. It was always the same in important particulars. Under rigid cross-ex-

* Read at a meeting of the Psychiatrical Society of New York.

amination few or no inconsistencies in it were brought out, and the prisoner fell into none of the traps which were laid for him. He told it, moreover, in a very convincing way; calmly, coherently, without dramatic exaggeration; in the simple, unaffected manner characteristic of the truth. Was it true? Did Wood have no recollection of what occurred between January 29 and February 5? That was practically the question the jury would have had to decide had the opportunity been given them.

### WOOD'S STORY.

As Wood told it to me about seven weeks before the trial the following is the story:

On Saturday, Jan. 28, 1905, Wood, an iron worker and contractor in a small way, had a conference with two men, named respectively, Wolfe and Mack, the object of which was that Wood might obtain a loan of $1,000, the money to be advanced by Mack's father, who lived in Scarsdale, Pa. The conference took place at a schoolhouse in New York City, where Wood was doing some iron work, and no one except Wood saw either of the two men. Wood knew Wolfe pretty well. Mack he had known two years previously when working at Long Branch, where Mack was a foreman or engineer. Wolfe was a traveling man. Wood did not know where either of these men lived. Wolfe brought Mack to the conference, Wood having seen Wolfe the day before. As a result of the conference it was agreed that Mack should go with Wood to Scarsdale on the following Monday. Wood did not regard it as peculiar that Mack should endeavor to get the loan for him. As the trip was to take a week, the following day, Sunday, Wood moved his family from his flat in One Hundred and Thirty-first Street to the home of his wife's sister in Twenty-seventh Street. He himself slept in his flat that Sunday night and the next morning started out, according to the arrangement, to meet Mack at the Pennsylvania Railway ferry at Cortlandt street at 9:45 o'clock.

In the street he met Wolfe, although he had no appointment with him, and Wolfe told him that the arrangements were changed somewhat; that Mack had gone on ahead, and that he (Wolfe) and Wood would go together to meet Mack. Wood had $28 at this time. Wolfe went to do some errands for Wood. Wood went to the barber's and had his moustache shaved off, and at about 12 o'clock the two men met at Cortlandt street and took the train for somewhere, Wolfe having bought the tickets.. Wood did not know where they were going, nor did he notice the names of the few stations at which the train stopped. Wherever it was, it was a junction at which they were to meet Mack and thence continue the journey to Scarsdale with him. Arriving at the junction after about an hour on the train, Mack met them and they all went across the street to a resturant. Wood described the junction in some detail, but the description did not fit any junction near New York. At the restaurant they had something to eat and some beer. After the beer Wood remembers nothing till he woke up in the Tombs on February 5. On awakening in the Tombs he had no money. He had on a cap instead of a hat which he had started with, and a red sweater which he could not account for. The grip, which Wolfe had bought for him, and in which his things were, had disappeared.

Wood said that he had no definite recollection of anything that transpired between Monday, at the junction, and the following Sunday in the Tombs, but that he had a confused idea of a little dark man following him and leading him, of being continuously on the train, and of talking with his wife and children. He denied all knowledge of being in or near Plainfield at the time he was seen there; said he never had heard of Williams; that he had not had a pistol since the preceding August, when his own was stolen.

Such was substantially the story Wood told me. In what way he changed it in subsequent rehearsals will be referred to later.

### SUMMARY OF WOOD'S REAL DOINGS.

What actually happened during the period referred to above, as testified to by witnesses at the trial, is as follows:

On Saturday, Jan. 29 Wood told his wife he was going to Scarsdale with a Mr. Mack whom he had known slightly at Long Branch, and of whom Mrs. Wood had heard him speak several times. He was going to get some money, he said. Accordingly the family moved from One Hundred and Thirty-first Street to Twenty-seventh Street on Sunday, Wood going back to his own place to sleep and, probably, slept there. He was next seen at Blinn's Hotel in Plainfield, N. J., on Monday afternoon, where he registered in his own name, taking a room without board. He brought with him a valise in which were found subsequently, his business cards, letter heads, some toilet articles, and a box of 32 caliber cartridges. That evening he retired early. The next morning, Jan. 31, he hired a horse and sleigh with driver to take him to his grandmother's place at Mt. Horeb, and reached there before noon. He talked naturally with his grandmother, who said he was "never kinder or nicer." She said he had a wild look in his eyes. Wood's father-in-law, a Mr. Whitten, lived about half a mile from his grandmother, and after eating lunch at his grandmother's, Wood made a call on his father-in-law. Returning in a short while he paid the driver who had brought him out and told his grandmother he had business with his father-in-law and would spend the night with him, which he did. He said to his grandmother that a man named Mack had

The defendant in the case, George H. Wood.

gone to Pennsylvania after beams and when he came back there would be plenty of work. He said that if Mack didn't come by Saturday he would return to his grandmother's.

Wood returned to his father-in-law's house about 7 p. m. and spent the night there with him. The two men slept together and Wood went naturally to sleep. He laid before his father-in-law a proposition that he (Mr. Whitten), should come to New York and work for him as book-keeper, which proposition was accepted. He gave Mr. Whitten a $2 bill, which the latter said was an unusual performance. Otherwise he noticed nothing wrong with Wood, finding him exceptionally goodnatured and agreeable.

On the morning following Wood returned to his grandmother's. On the road he met a young man named Linnartz, whom he had known before and who was then working for his grandmother, Mrs. Pollock. Linnartz told Wood that he was going into Plainfield and would drive him in, which he did. On the way Wood took a revolver from his pocket and fired it three times, explaining that he wished to see if the dog which was following them was still gun-shy. He said the cartridges were blank. He had a cap in his pocket which he put on for part of the drive, saying it was too cold for a hat. On arriving in Plainfield he and Linnartz had a few drinks together and then Linnartz went home. That afternoon and evening Wood passed in the bar room of the hotel, talking, smoking and drinking with a number of persons. He was sociable and pleasant. At 11 o'clock the proprietor of the hotel shut up. Wood at first seemed disinclined to go upstairs, but finally did so without disturbance. There was no evidence to show that he was intoxicated at any time.

The day following, Feb. 2, was the day of the shooting. The hostler saw Wood leaving the hotel and exchanged "Good morning" with him. At about half past 9 that morning he stopped in the superintendent's office of the Kirke Iron Works, laid down his card, and inquired of the superintendent as to getting some contracts for iron construction, and after conversation relative to the iron trade, went away. He then stopped at a hotel on the outskirts of Plainfield and called for a drink of whiskey. He told the barkeeper that he wanted to go out to the Pollock place and the barkeeper directed him to Mr. Demler's, which was near by where he might find a conveyance. Mr. Demler lived next door to the house and grocery store of Williams, the victim of the tragedy. Coming to the grocery store Wood inquired for Mr. Demler, but was told that he was away. He then asked Williams if he would take him to the Pollock place and he hired Williams to do so. Before starting, and while Wood was near to and facing him, Williams took some money from his vest pocket and put it in a bag and then put the bag in his trousers' pocket. Williams drove and Woods was on the left hand side of the sleigh. A number of persons passed the two men driving on towards Mrs. Pollock's, Wood's grandmother.

At a point about a mile from Mrs. Pollock's the road is hedged in with trees, and although there is a house about 1,000 feet away, it is not visible from the road, nor the road from it. From this point, at about 11 o'clock, a farmer who was working in the woodshed of the house referred to, heard the report of a pistol. Shortly afterward, several men went down the road and saw the horse and sleigh standing still in the middle of the road, with the reins under the runner of the sleigh. Williams was sitting upright in the sleigh, alone and dead. He had been shot in the back with a 32 caliber bullet. The sleigh robes were wrapped around him, the clothes were not disarranged, his hat was on, and there were no signs of a struggle. Tracks were seen in the snow at the side of the sleigh as if a man had jumped out of the sleigh backward and had walked or run, using long steps in the snow by the side of the beaten track until he had passed the horse, and then again into the beaten track, then in the same direction along the road for a distance of about a mile. At times these tracks were close together, at other times a considerable distance apart, until they lead to a farmhouse. It is supposed that the person who made these tracks was Wood, and that he heard the sleigh bells of a neighbor coming toward him on the road and that he went into this place to hide. The tracks thence led in a straight line for two miles across country, over barb wire fences and through woods and different places, the snow being very deep, to a road which led to Millington Station. Near Millington Station, at about 12:30 p. m., a man was seen by three witnesses who at the trial identified him as Wood.

### THE WIFE'S TESTIMONY.

That same afternoon, Thursday, February 2, about 3:30 o'clock, Wood appeared at his sister-in-law's house in West Twenty-seventh street. Relative to this his wife testified:

"When he came in he closed the door behind him and stood up against it; I looked at him and asked him if he got back, and he said 'Yes.' I saw he had a cap on, and I said, 'Where did you get the cap? Where is your hat?' and he said, 'I lost my hat and valise on the train,' and I said, 'Did Mack lose anything?' and he said, 'No, he had a little valise and he put that up in the rack, and I put mine in the aisle of the train and went to sleep, and when I woke up my hat and valise were gone, and this was all I could get.' I asked him if he got the money, and he said that they had went to Mack's father's, and that Mack's father told him that his money was all out in Summit, and that they had started back. I said, 'Where is Mack now?' and he said 'I don't know where he is; I left him at Summit,' and he said, 'I was up in the mountains.' I said 'Did you see grandma?' and he said, 'Yes.' And I asked him how she was, and he said they were the same as usual. I said, 'Did you see Pop?' and he said, 'Yes!' . . . He told me he had to meet Mack at 9 o'clock that night when the train came in. My sister and my brother-in-law were there. When my brother-in-law came in he said, 'Well, George, how did you make out?' and he said, 'I have not done with him yet.' Then we had supper. When we sat down to eat he only ate a little. . . . He just sat there as though he was thinking, and he looked so wild in his eyes; and he says, 'Well, I guess I will have to go now.' And I said, 'Why are you going so early if you are going to meet Mack at 9 o'clock?' and he said, 'I have a couple of other places to go to, and by that time it will be time to meet him.' I said, 'Will you come back tonight?' and he says, 'Yes, but if I don't happen to get back, don't wait up for me,' and the last thing he said going out of the door was, 'I will be back if I can get back.' And I said, 'All right, we will wait up for you.' And he did not come back all night." He did not return to his sister-in-law's until the next day, Friday, at about half-past 2 in the afternoon. Then he apparently had forgotten that he had been there the day before. His wife, in her testimony, continues: "When he came in I asked him if he had met Mack that night, and he looked at me and said, 'Met Mack? I wasn't to meet Mack.' And I said, 'Yes, you told me you were going to meet Mack at 9 o'clock.' 'Why,' he says, 'I have only just come over the ferry now.' I says, 'Why, you were here,' and he would not believe it, and I could not make him believe he had been there on Thursday. . . . He said he had been to Searsdale, and to Mack's father's, and that they had started back from there, and I asked him if he had got the money, and he said 'No,' that Mack's father had the money out at Summit; he said that he had just come across the ferry from leaving Mack, and he told me that they went to some junction, he didn't know what junction. That they got off at this junction to wait for a through train, and while they were waiting they went in some restaurant or some place to get something to eat, and they had a glass of beer and something to eat, and he said that while they were drinking, why he didn't know no more from that time on, he didn't know where Mack went to and what happened to him. My sister and brother-in-law were in the house during this Friday afternoon and evening. . . .

"Two men came in and asked if my sister was Mrs. Bishop and Mabel said, 'Yes.' . . . And they said, 'Do you know of George H. Wood?' My husband was sitting there and he says, 'I am George H. Wood, what do you want?' And these men looked at him for a minute, and came in and closed the door, and they said, 'Have you not seen the papers?' And my husband said, 'Yes, I have seen them.' And they said, 'Don't you know detectives are looking for you?' And he said, 'No.' And they said, 'You are connected with that murder case out in Watchung, New Jersey,' and he looked at them so surprised, he did not know what to make of it, and said, 'What murder case?' and we got the paper and read it; and he did not seem to understand what they meant. And then they told him that there was a valise out in Plainfield at the hotel with his name on; and he could not understand how his valise had got in Plainfield. He said he had not been to Plainfield since last summer. Then they went on to ask him if he had ever known this man Williams, and all about it, and he told them just what he had told me.

"Then, while the reporters were asking questions, one of them says to me: 'Have you had your husband to a doctor since he came home?' I says 'No, sir.' . . . I took my husband to Dr. Ball on Twenty-eighth Street. He didn't want to go at that time. He said he would like to lie down and sleep. He said that his head ached him so he thought if he laid down and slept he thought he could think better. . . . I took him to the doctor's and he was told who he was, and I asked the doctor if he thought he had been hypnotized, and he said, 'No.'"

### DR. BALL'S TESTIMONY.

Dr. Ball qualified as having had a certain amount of experience with the insane. He testified:

"This defendant came to my office accompanied by his wife and a gentleman who claimed to be a newspaper reporter; the request was made by the reporter that I examine this man Wood, without qualifying what kind of an examination it should be. I proceeded to examine him as to his physical condition. After a few questions it became apparent to me that

the man was suffering from mental defect. . . . My questions were not answered in a way which satisfied me that the man knew what he was talking about, and therefore my conclusion was that the examination was for his mentality, which I did in a rather cursory way, because it was a case concerning which, after the story had been recited to me, I did not wish to go on record, and I said very little about it at that time. As he came in I noticed he had a very shambling gait, and as he sat in the office his expression was one of complete mental apathy, looking into space. No questions of mine elicited what I would call a normal answer. His answers were rather of a negative type, all of them; his face was a complete blank, eye-balls sunken in the head and the pupils very much dilated; the whole physiognomy presented the appearance of a man who did not know what he was talking about. I had a chance to observe him for possibly twenty minutes, and maybe half an hour.. . . . Practically the same story that I have heard related here to-day was related in Wood's presence that afternoon, but Wood seemed perfectly oblivious, perfectly indifferent to what was going on. I could not arouse him to any concern or interest. . . . I had never seen this patient before that day and was not acquainted with any of his family. . . . As to his condition now as compared with what it was on February 3 last I should say physically he is a little thinner, but to me his mental appearance seems to be slightly brighter, he seems to have more expression to-day than he did that evening in my office, very much so.

CROSS-EXAMINATION OF DR. BALL.

Q.—"Now, supposing you had known at that time that a man had been riding with another man a few days before, and had shot and killed him, and then had made his way across the mountains to a station, and subsequently shaved his moustache from his face, and gone home, and that afternoon had been confronted by newspaper reporters with the charge that he was the person who was guilty of this murder, and immediately brought to your office, what would you say with respect to the effect it might have on his mentality, being of the character and nervous temperament he naturally was?"

A.—"I should rather have felt that the mental condition existed, and that he had committed the crime under that mental distress and disturbance."

Q.—"If you had known that he had been in a normal mental condition preceding, with no trouble in that direction, how would that have affected your judgment, or rather your conclusion, coupled with the knowledge of the occurrences I have narrated?"

A.—"Well, I should feel it was one of those very sudden forms of delusion or sudden insanity, possibly of the maniacal type."

Q.—"And it was impossible for you to tell at the time when that attack had gone, when the change had arrived?"

A.—"Quite impossible."

Q.—"Are these maniacal attacks characteristic of primary dementia?"

A.—"Not in the primary stage, hardly so, not ordinarily so."

Q.—"Then if that is so, your conclusion would be that at the time you examined him he was in a state of primary dementia, but unless you had some facts or circumstances warranting a conclusion otherwise you would not think that he had been previously in a maniacal state?"

A.—"I would not."

Q. (by the Judge)—"Is it possible or likely that any of these conditions you observed could have been feigned?"

A.—"I hardly think so, your Honor."

Q.—"What was the writing test?"

A.—"I asked him to write his name and address. When I handed him a pencil, in a blank sort of a way and with rather an inquiring glance he seemed to want to know what I wanted him to do, and when I asked him to write his name he made a few marks on the paper and handed me the pencil again. I shook my head and still insisted and handed him the pencil again, speaking loudly and distinctly, arousing him, so to speak, from the lethargy which was apparent; and he wrote his name in a very sprawling way; you could not know it; I would not be able to read it at all distinctly. I don't think it was in his natural hand, but that is only a conjecture of mine. I don't know how well he wrote before that, or whether he wrote at all."

Q.—"Did he give you the address?"

A.—"He wrote the address, Twenty-seventh Street, I think."

Q.—"Do you know whether it was correct or not?"

A.—"I do not."

Q.—"Is he suffering from primary dementia or was he only suffering at that time?"

A.—"I could not say. I have not seen the man except to look at him. I have not talked with the man since that day."

Q.—"Did he hesitate to do anything that you directed him to do on this examination?"

A.—"He did."

Q.—"In what respect any more than you have already stated?"

A.—"None, except as I have stated, so far as I remember at the present time—his hesitating answers, his hesitation in writing his address."

Q.—"Did he seem to be trying to aid you?"

A.—"Yes; he seemed not averse at all to aiding so far as he had the sense of perception to do so."

REPORTER'S TESTIMONY.

A reporter for the *New York World,* who was with Wood for some time Friday afternoon, testified that Wood did not look to be a man in the full possession of his senses. He said:

"He had a peculiar look in his eye; he was uncertain, vague and indefinite; and in questioning him his replies were indefinite. He could not draw on his mind sufficiently to answer properly, though he made the effort. Mr. Fuller, another reporter, and myself both appeared in the Twenty-seventh Street house together. We asked the questions alternately, as they suggested themselves to us. We asked Mr. Wood if he knew he was accused of murder; he looked at us in a surprised sort of way, and he said, 'What, me accused of murder? I don't know anything about it.' At that Mrs. Wood, who was present in the room with her three children, asked us what it was, and we pointed out to her a story in the first page of the *World* . . . and she read it to her husband, and he expressed a sort of surprise that the thing should concern him, and on questioning if he had been in that locality, he said, 'Why, I have not been in that locality for months.' Then we questioned him as to his doings from the Monday morning when he disappeared until his return, and he told the story as reported in the *World* on Saturday, Feb. 4, of having met an individual named Mack and going with him to the Pennsylvania ferry and there taking a train which he believed was for Scarsdale, Pa.; that he did not remember having reached Scarsdale; that he suffered seemingly a lapse of memory, but he rememberd getting off at a junction point. We stated a number of junction points along the Pennsylvania line, and he could not recall by name any of the junction points. We suggested several, Monmouth Junction, Princeton Junction, and such as we could recall at the time, but he could not concentrate his mind, and he said no, he did not believe it was any of those points. However, at that time he said he had not met Mack, or Mack's father, whom he was going to see to get $1,000. He remembered getting off at this junction and going to a restaurant and having something to eat. He then had a recurrence of his mind and said that he went to the depot and got on another line, and after that he suffered another lapse of memory, and if I recall correctly, in my story that appeared on Saturday morning, he said something about having arrived in Trenton, and then from the time he arrived in Trenton until he had a next recurrence of memory, I believe was in Elizabeth, if my memory does not fail me. But the facts as related in the *World* of Saturday were true."

Q.—"What were his looks, can you describe them?"

A.—"Well, his look is rather hard for a layman to explain. It was not the look, as I would say, of a sane person. I have had considerable experience in dealing with persons who were not of sound mind . . . and they generally have an odd expression in the eyes, and I can truthfully say that Mr. Wood had an odd expression in his eyes the night I saw him."

CROSS-EXAMINATION OF THE REPORTER.

Q.—"Aside from the look of which you have spoken, and the seeming loss of memory was there anything else which occurred to you at the time which indicated a want of understanding?"

A.—"No, sir, but I am not an expert on those points."

Q.—"He understood all of your questions?"

A.—"Yes."

Q.—"And he answered all of your questions?"

A.—"Yes, sir, as best he could."

Q.—"And you advised him who you were, that you were a reporter for the *World?*"

A.—"I told him, yes, sir."

Q.—"And he understood that?"

A.—"Yes, sir."

Q.—"And he realized that, he knew where he was, at home there with his wife and you?"

A.—"I don't know whether he realized that he was in his own home."

Q.—"He realized he was in New York City, did he not?"

A.—"Yes, sir, he was told he was in New York City."

Q.—"And he realized what you were there for, too?"

A.—"I believe that he did."

Q.—"You say his wife read the story in the *New York World?*"

A.—"That is, the small story the day after the murder of Mr. Williams."

Q.—"And did she read it aloud so that he heard it?"

A.—"She did."

Q.—"And did he make any comment on the story?"

A.—"No, he acted absolutely indifferent."

Q.—"Did he say nothing at all?"

A.—"I do not recall that he made any remark other than the statement I made a few minutes ago; he said that it was nonsense. He said, 'I was not within miles and miles of that place.'"

Q.—"He did not read that story himself?"

A.—"Not that I recall."

Q.—"Nothing was said at that time about Wolfe?"

A.—"No, sir, Wolfe's name did not enter into it."

Q.—"And he did say at that time that Mack had left New York with him, did he not?"

A.—"Yes, he left New York with Mack."

Q.—"Did he say to you that he not seen Mack's father in Scarsdale, or that Mack's father had not the money which they wanted, but had invested it in Summit, N. J.?"

A.—"He said he remembered having got off at this junction point; he never remembered having reached Scarsdale."

Q.—"Did he not say that Mack's father had invested his money in Summit, N. J.?"

A.—"That I do not recall."

DR. MAGUIRE'S TESTIMONY.

On Saturday, February 4, Wood, then a prisoner, was examined by Dr. Frank Maguire, physician to the New York City prison. After a thorough examination, Dr. Maguire testified:

"I believed him to be mentally competent and sound and sane at the time of that examination made on Feb. 4 of the present year at the city prison."

Q.—"Did he say anything about epileptic seizures?"

A.—"Denied it either in the greater or lesser form."

Q.—"What did you find about his memory and speech?"

A.—"He had no speech or memory disturbance; he had no paralysis or paresis."

Q.—"Any hesitation about answering questions?"

A.—"In a listless way."

Q.—"Any inability to comprehend or understand?"

A.—"No, sir. He understood everything properly and without much hesitation."

AUTHOR'S EXAMINATION.

I examined Wood at the county jail, Somerville, N. J., March 23, 1905.

In appearance he was rather pale, but well nourished and fairly robust. He presented no physical stigmata of degeneration, with the possible exception of prominent frontal teeth, and no marks of preceding syphilis. A slight tremor of the tongue was the only objective symptom. He said that he was 27 years of age, married, with three children, one of whom had had two convulsions at the age of 3; that his father, who was a nervous man and complaining, died of Bright's disease at the age of 54; that his mother, who was subject to nervous headaches, died of cancer at the age of 41; that he knew of no member of his ancestral family who had ever been alcoholic, insane or subject to fits. His only sister committed suicide on account of a love affair; his only brother died at 7 years of age from valvular disease of the heart.

Wood went to school till he was 12 years of age. At the age of 14 he began earning wages, and from that time he kept constantly earning a little more. He was married at 20, was domestic in his tastes and sober in his habits. With the exception of headaches, to be referred to later, he said his health was good.

At this examination Wood told substantially the same story regarding his period of alleged amnesia as has already been given. The most important variation was that, whereas the experts for the defense endeavored to make it appear that the man Wolfe was an evil genius of Wood's, that he had persecuted Wood for years, and that Wood feared and hated him, Wood stated to me that he and Wolfe were always friends, and that the only reason he had for doubting his friendship was that he had thought that, in view of the circumstances, Wolfe should come forward and substantiate Wood's story.

At the trial Wood testified that Wolfe was an illegitimate child of his father. He made no mention of Wolfe to his wife until after he had been some time in the Somerville jail. The first record of his speaking of Wolfe was to his counsel, when he was in the Tombs, in New York, five or six days after the murder. He further denied everything tending to show that he had delusions of persecution.

Of the two men, Mack and Wolfe, who figured so prominently in Wood's story, Mack was a real person who had employed Wood at Long Branch two years before, but had not heard from him since; as to Wolfe, there was no evidence at all that he ever existed outside the imagination, disordered or otherwise, of the defendant.

The only motive for the crime that the prosecution could advance was that Wood killed Williams for the money he saw the latter put in his pocket just before starting out on the sleigh ride. That no attempt was made to take the money from the dead man was explained by assuming that the murderer had been startled into immediate flight. There was considerable evidence that Wood was short of money at the time he left New York.

WAS WOOD IRRESPONSIBLE?

Three hypotheses suggest themselves, by any one of which Wood might be considered as irresponsible for his act. These hypotheses are: 1, Epilepsy; 2, amnesic automatism (non-epileptic); 3, insanity.

1. *Epilepsy.*—As to the theory that Wood was an epileptic, subject to seizures and periods of amnesic automatism, there was considerable evidence. At the time of my examination Wood's story in this respect was as follows:

At the age of 12, following an attack of scarlet fever, he first developed headaches. He said his head always ached, but that the pain became much worse at times.

In the past five years his headaches caused him to stop work 20 or 30 times. He said:

"My head aches continually, sometimes right down in the back, other times in front. Everything turns black when they get very bad. I can not stand up, get dizzy and have to go to bed. My eyes seem to pain, and at times I can not see anything. I am not sick at my stomach at these times, and very rarely faint. At different times I have lost consciousness for a few hours at a time. At some such times my wife has tried to arouse me and could not; she has been frightened and sent for a doctor. When the doctor came he said it was a headache. Sometimes these headaches come on suddenly and other times I know they are coming by an increase in the pain. I have fallen down in some of the headaches. Once I fell with a piece of hot iron across me, which my helper took off. I did not know I had got home till my wife fixed me up. This was four years ago. It has happened to me that after one of these attacks people have told me of things I have said that I remembered nothing about. Last September my partner Stevenson took me home from the Bronx in one of these attacks. He said I was talking with him at the time, but I remembered nothing about it. I was in that condition for one day. At other times I have told my men to do some work, and then not remembered having told them. The men thought I was lying about it. I never got in any trouble in any of these attacks, never fell to hurt myself, never had a fit, never found myself black and blue, have found my tongue sore in the morning sometimes, but never any blood on it. My wife has told me I had spells at night, but I don't know anything about it."

The testimony of Wood's wife in regard to epilepsy was substantially as follows: Wood at one time came home, saying he had fallen off a building. He was pale, vomited, and said he wanted to lie down. When he woke up, he did not know how he had reached home. Mrs. Wood testified to further spells which her husband had at night. He would get up out of bed, ask for a glass of water, be in a state of perspiration. He would ask his wife to speak to him, and then he would tell her that he knew what she was going to say. In the morning he would remember nothing about it. During these spells he had understood and intelligently answered questions. His wife did not consult a physician about these spells.

Wood's grandmother testified to his having had headaches for many years. On one occasion, when less than 13 years old, he fell out of a peach tree and lay on the ground for some time, "just like a corpse." In some of his headaches he "looked wild and talked strange."

Wood's aunt testified that on one occasion she found her nephew in a fainting spell. When he came out of it he asked where his wife was and he went upstairs to her.

Such was the evidence for epilepsy. No one had seen Wood fall, there was no evidence that he had ever had a convulsion. The only evidence that he had been in amnesic automatic states besides his own word (which was not substantiated by other witnesses) was that given by his wife, consisting in certain attacks he had at night. During these attacks he understood and answered questions. One of the experts for the defense elaborated an ingenious theory in support of epilepsy. It was to the effect that Wolfe had no existence, and only appeared to Wood just before a psychic epileptic seizure. Wolfe, therefore, was an aura, and after seeing him Wood was assumed to be in an epileptic state. Certainly the diagnosis of epilepsy on such meager symptoms, even were all motive to deceive absent, would be hardly possible. Such a diagnosis is made extremely improbable by the character of the crime itself and Wood's conduct after its commission.

Assaults and murders committed by epileptics during the periods of violence which may precede, follow or take the place of the fit are characterized by great ferocity and unreasoning violence, mutilation and multiplicity of blows. Soon after the deed is done the epileptic often falls into a deep sleep or coma. It is practically unknown for him to take elaborate precautions against detection. All the evidence in the present case went to show that the murderer acted with reason and intention. The deed was done with a single shot and without further violence; the body of the victim was undisturbed; the footprints in the snow left little doubt that the murderer had thought out means of escape. Wood had a mustache when he left Plainfield on the fatal morning. When arrested in New York the mustache had been shaved off, and some of his clothes were different from those he went away with. With all the facts in mind the hypothesis of epilepsy in explanation of this case seems absolutely untenable.

2. *Amnesic Automatism* (*Non-epileptic*).—It is extremely doubtful if non-epileptic amnesic automatism can ever be successful as a defense in criminal trials. It would throw the doors open to every crime being excusable by the criminal saying that he might have done it, but had forgotten all about it. That there are such amnesic states lasting considerable periods of time and uncomplicated by other motor or psychic phenomena of epilepsy, medico-psychologic annals abundantly prove. The patients perform complicated co-ordinated acts, retaining or changing their personality; they may associate with those who know them without arousing suspicion that their mental state is abnormal. After such periods, the memory of what transpired is blurred or indistinct. In certain cases some or all of the events can be brought to light by means of hypnosis. At the time of my examination an attempt was made to hypnotize Wood by Dr. H. B. Deady, late assistant director of the New York State Hospital's laboratory. Although Wood seemed to fall into a slight degree of hypnosis, he could not be made to disclose anything regarding the occurrences of the amnesic period.

In the cases of non-epileptic automatism or secondary consciousness which have come under my immediate observation, the patients have shown by their acts that they were controlled by the same fundamental morals in the secondary state as governed the primary or waking state. Some patients have been more irritable than usual, but none to the point of quarrelsomeness, and none have gotten into any trouble.

Experimental psychology tends to show that it is impossible, in artificially induced secondary states, to eradicate or even to overcome the inherited and acquired morals by which the individual has for years been guided in his normal waking consciousness. It is my firm conviction that no crime would be committed in a secondary state were not the individual a criminal at heart in his primary state, or a weak-minded person under the influence of strong and direct hypnotic suggestion. In the present case there was no question of such suggestion.

3. *Insanity.*—Mrs. Wood, in her testimony, said she had never thought her husband insane, and, leaving aside Wood's own fantastic story, there was very little evidence to support the theory of insanity. His wife said that, about one year before, after a young man and his wife who had been calling on them went away, Wood came to her and said that he had been married before, and the young woman who had just left was his wife.

The husband of the young woman in question, a Mr. Smith, testified that he had thought Wood peculiar. About a week after he (Smith) was married, he and his wife went to call on the Woods. Wood gave Mrs. Smith a very peculiar look as she came in. Later Wood told Smith that the sight of Mrs. Smith gave him a great shock. Wood said that he was married when 15 or 16 years of age, and he thought this Mrs. Smith was his wife. Later he began to question Mrs. Smith about her past. On another occasion he put his arm around Mrs. Smith, alleging that his first wife had a tender spot on her side, and he wanted to experiment to see whether Mrs. Smith were the person or not.

There was nothing in Wood's conduct while in prison or at the trial to suggest insanity. Neither delusions nor hallucinations were established. His memory, with the one notable exception, was excellent, his manner straightforward, his cerebration prompt. He seemed interested in his trial, but took no part in the conduct of it. He seemed affectionate and good natured.

But even with absence of definite proof, the most reasonable explanation of this remarkable case seems to be that Wood was insane. I have never been able to doubt that the story Wood told, clean cut and consistent as is was, was a fabrication and that he retained a full recollection of the period he said he had forgotten; I believe that he knew that he killed Williams and why. But I can not free myself from the impression that at the time that he fired the fatal bullet his motive was one that only an insane man would have acted on; that it was a product of some deep-seated delusion, which no one as yet has been able to discover.

The final disposal of the case was the most satisfactory one possible under all the circumstances. But by it is emphasized the necessity of the passage of a law by which criminals whose sanity is questionable can be placed for observation in hospitals for the insane before they are tried on the criminal charge. Such laws are successfully in force in Maine, New Hampshire, Vermont and Massachusetts.

In February, 1906, I visited Wood at the state prison, Trenton, N. J. He talked with me pleasantly. He said Wolfe committed the crime, and that he (Wood) was convicted by graft and by perjury. He said that now he remembered where he was at the time of the shooting, but that it was not in the neighborhood of Plainfield. His general appearance was the same as at the time of the trial. He laughed rather foolishly at times, and the tremor about face and tongue had markedly increased. In the shoe shop he had made the reputation of being a good workman, quiet, reserved and perhaps a little queer. His health had been good.

## SUGGESTIONS IN REGARD TO DI-METHYL-AMIDO-AZO-BENZOL AS AN INDICATOR FOR FREE HYDROCHLORIC ACID IN GASTRIC ANALYSIS.

WARREN PHILO ELMER, M.D.
Instructor in Medicine, St. Louis University.
ST. LOUIS.

During the past few years several observers have noticed certain sources of error in determining the quantity of free hydrochloric acid in the gastric contents by the usual quantitative method, using di-methyl-amido-azo-benzol as an indicator.

1. The principal difficulty with this indicator is not its lack of delicacy, but the fact that certain organic acids found in the gastric contents will, when in proper concentration, give the same color change as does free hydrochloric acid. Especially has this been noted in regard to lactic acid, which is one of the most common organic acids found in the stomach under certain conditions. However, other acids give similar reactions, and the following table of organic acids which may be found in the stomach shows the concentrations in which the reaction appears:

| | | | |
|---|---|---|---|
| Hydrochloric acid gives characteristic reaction diluted | 1 | to | 13,000 |
| Lactic acid gives characteristic reaction diluted | 1 | to | 1,500 |
| Phosphoric acid gives characteristic reaction diluted | 1 | to | 1,200 |
| Acetic acid gives characteristic reaction diluted | 1 | to | 200 |
| Butyric acid gives characteristic reaction diluted | 1 | to | 100 |

From this table it appears that acetic, butyric and phosphoric acids could hardly be found in sufficient concentration in the gastric contents to interfere with the reaction. Lactic acid, on the contrary, is found rather often in such quantities, and herein lies the difficulty.

My plan to obviate this is as follows: First give a test meal which, as far as possible, is free from lactic acid. For this purpose the routine test breakfast which has been used for the last three years at the University Hospital at Ann Arbor, Mich., seems to be most satisfactory. This consists of one shredded wheat biscuit and 300 c.c. of water, given after a fast of eight to twelve hours and withdrawn from three-quarters to one hour afterward. The acidity in a normal case is free hydrochloric acid 30, combined hydrochloric acid 2 to 10, organic acids 2 to 4, total acidity 40 to 45, in terms of decinormal sodium hydrate.

I have made tests of this meal outside the body as follows: Taking one shredded wheat biscuit with 300 c.c. of distilled water, I mixed them thoroughly and kept the mixture in constant motion at 37 C. for thirty, forty, fifty and sixty minutes, testing the filtrate at the above times for acids by the ordinary tests. Free hydrochloric acid was absent by all tests. Loosely combined hydrochloric acid was absent by all tests. Lactic acid was not in sufficient amount to give Uffelman's test, and the total acidity, consisting mainly of traces of lactic and acid phosphates, required from 1 to 2 c.c. of decinormal sodium hydrate to neutralize 100 c.c. of the fluid. This, then, is a practically lactic acid free meal, easy to give as a rule, not distasteful to the patient, requiring considerable mastication and of almost a constant weight.

The second difficulty, and in some cases the most important, is how to eliminate the error caused by an excess of lactic acid formed in the stomach. For this method I claim only approximate results, but its simplicity and the fact that it can be applied in conjunction with the ordinary methods, I hope, may recommend it to that class of stomach workers to whom time is an object. After many trials I found that the smallest amount of lactic acid that would respond to the di-methyl-amido-azo-benzol test was one part in fifteen hundred. The highest dilution which would give a characteristic Kelling test was one part in twenty-two thousand, or approximately fifteen times the dilution required to give the di-methyl-amido-azo-benzol test.

If, now, on diluting the stomach contents fifteen times with water and applying the Kelling test no reaction is obtained, there is no danger that the lactic acid present will interfere with the di-methyl-amido-azo-benzol test for free hydrochloric acid. If the Kelling reaction be positive, there must be at least .07 per cent. lactic acid, or enough to change the result of the di-methyl-amido-azo-benzol test for free hydrochloric acid by at least seven points. If this be the case I dilute again with an

equal volume of water and again apply the Kelling test, which, if positive, represents .14 per cent. or fourteen points.

Dilutions can also be made by making the second dilution one-half the volume of water in which a positive reaction represents at least ten and one-half points or one-fourth the volume of water, in which a positive reaction represents at least eight and three-fourths points, and so on. The amount of lactic acid thus obtained is subtracted from the free hydrochloric acid obtained and the result is approximately correct for free hydrochloric acid.

The question now presents itself, Will a quantity of lactic acid not sufficient to give the test with di-methyl-amido-azo-benzol unite with the hydrochloric acid in producing a vitiated result? To determine this point I added .05 per cent. of lactic acid to a solution of hydrochloric acid of known strength, titrated, using di-methyl-amido-azo-benzol as an indicator and obtained practically the same readings as before adding the lactic acid.

By this method of procedure the ordinary di-methyl-amido-azo-benzol indicator can be used at all times, and when lactic acid is present the results can be sufficiently rectified for clinical purposes.

612 North Taylor Avenue.

## THE BLOOD PLATES.

### THEIR ENUMERATION IN PHYSIOLOGY AND PATHOLOGY.

GEORGE T. KEMP, M.D., PH.D.
Professor of Physiology, University of Illinois.

WITH THE COLLABORATION OF HENRIETTA CALHOUN, A.M., AND CHESTER E. HARRIS, A.M.
CHAMPAIGN, ILL.

(*Concluded from page 1027.*)

*Bizzozero.*—The reagent which commonly goes by the name of Bizzozero's fluid consists of a 0.75 per cent. aqueous solution of sodium chlorid, to which is added a small amount of methyl violet (about 1 part to 5,000).[12] This was not recommended by him for numeration work. Bizzozero preferred the Laker method, and the fluids he used for determining the ratio of the plates to the red corpuscles are described differently in different publications we have consulted. In referring to some of his old experiments made by himself in 1884, and in collaboration with Sanquirico in 1886, Bizzozero[14] states that the fluid used was made in accordance with the following formula:

| | |
|---|---|
| 1.0 per cent. osmic acid, aqueous solution | 1 part. |
| 0.7 per cent. sodium chlorid, aqueous solution | 3 parts. |

In referring to the same experiments in another article he[28] gives the percentage of the sodium chlorid solution as 0.1 per cent. This we take to be a misprint and regard the 0.7 per cent. as more probably correct. Pizzini[29] quotes from Bizzozero's text-book[30] that the fluid recommended is 1 per cent. osmic acid colored with methyl violet. For criticisms on these fluids see acid, osmic, above.

In addition to these osmic-acid fluids, Bizzozero also recommends a 14 per cent. solution of magnesium sulphate in water. We have tried this and find that, while it preserves the plates, the red corpuscles are distorted and sometimes buds are shed from them.

28. Bizzozero: Virchow's "Festschrift," 1891, p. 472.
29. Pizzini: Riforma medica, 1894, vol. ii, p. 376.
30. Bizzozero: Microscopic Clin., Third Edition. Year, page and full title not given.

*Brodie and Russell.*—Brodie and Russell[26] have usually employed a mixture of equal parts of glycerin saturated with dahlia and a 2 per cent. aqueous solution of sodium chlorid. This gradually decolorizes the red corpuscles, but the ratio can be determined before this occurs. This liquid is used without a counting chamber. We have tried this method and found that it gave good results.

*Cadet.*—Cadet[31] used iodized serum and also a fluid which he calls "liquid B," for which we quote his formula:

| | |
|---|---|
| Distilled water | 1000 gm. |
| Sodium sulphate (pure) | 25 gm. |
| Sodium chlorid | 5 gm. |
| Chloral hydrate (pure) | 25 gm. |
| Chromate de soude[32] | 0. gr. 20 |

All the ingredients must be pure. The chromate de soude must be weighed exactly. Filter each time before using. We have not tried this fluid. It was tried by van Emden, who says he prefers the Prus fluid without stating any definite objection to the fluid of Cadet.

*Chromates.*—With Müller's fluid and potassium bichromate solutions (6 per cent., 4 per cent. and 1 per cent.), we found that granules are formed after a time, and these, under a low power, may cause confusion in counting the blood plates.

*Determann.*—In most of his experiments, Determann used a 0.9 per cent. aqueous solution of sodium chlorid, colored with methyl violet. This is practically the same as Bizzozero's old fluid. It is not a fixative, and our experience with it leads us to condemn it for numeration purposes, though we can recommend it as a convenient fluid for examining the plates. It retards their breaking down, but does not prevent it. Determann's method has been fully discussed in this paper.[33] Determann also used a solution containing 1 per cent. sodium chlorid and 5 per cent. potassium bichromate. We have not tried this particular combination. Our experience with chrome-salts is given above under Chromates.

*Fusari.*—Fusari[23] used the following fluid: Equal parts of 1 per cent. osmic acid and 0.75 per cent. NaCl solution, colored with enough methyl violet to give the mixture a slight violet tint (leggera tinta violetta). Later he substituted an aqueous solution of $Na_2SO_4$ (specific gravity 1025) for the 0.75 per cent. NaCl solution in the above, and says that this makes a first-class preservative fluid (un ottimo liquido conservatore). Even with this he records cases where the plates were clumped in groups and a fresh preparation had to be taken. He counted 400 small squares of the Thoma-Zeiss instrument.

*Hayem.*—Hayem's[34] fluid A, which he recommends for counting the red corpuscles, and which is generally known as Hayem's fluid, is made in accordance with the following formula:

| | |
|---|---|
| Mercury bichlorid | 0.5 gm. |
| Sodium chlorid (pure) | 1.0 gm. |
| Sodium sulphate (pure) | 5.0 gm. |
| Distilled water. | 200.0 gm. |

It is not a good fluid for counting the blood plates, as it often produces a precipitate which is confusing. The fluid used by Hayem in most of his blood-plate numerations was the iodized serum of Max Schultze. But this is difficult to prepare and when not properly made it is unfit for use.

For Schultze's iodized serum Hayem substituted the

31. Thèse de Paris, 1880, pp. 36-38.
32. This line is copied literally from Cadet's recipe. We are in doubt as to whether he means chromate or bichromate. The "0. gr. 20" is also exactly quoted.
33. See H. under Methods.
34. Hayem: Arch. de Physiol., 1878, vol. v, p. 700; also Hayem, Du Sang, Paris, 1889, pp. 16, 28, 31 and 38.

amniotic liquid of cows and of sheep. This is carefully prepared in the winter and kept in Pasteur flasks until needed. He uses "eau oxygenée" (peroxid of hydrogen) as a preservative, and when blood plates or leucocytes are to be counted he adds a small amount of methyl violet 5 B. Hayem also used diabetic urine of specific gravity at least 1039. To this was added 6 per cent. of "eau oxygenée à 12 degrés."

The latest fluid which we have found Hayem[35] to recommend is one which, he says, is particularly adapted to human blood. It is made by preparing an iodin solution according to the following formula:

| | |
|---|---|
| $H_2O$ (distilled) | 500 gm. |
| KI | 25 gm. |
| I (metallic) | excess. |

and replacing the mercury bichlorid in fluid A by 3.5 c.c. of this iodin solution.

Of the several fluids which Hayem has used we have tried only one, viz., his fluid A. We agree with him that it is not to be recommended for blood-plate numerations on account of the precipitates which it produces.

Those fluids which require elaborate methods for preparation and for preservation are obviously objectionable from a standpoint of convenience.

*Helber.*—Helber,[10] continuing some older work of Pratt, each in Professor Krehl's laboratory at Tübingen, used a 10 per cent. solution of sodium metaphosphate. Each of these observers found that the blood plates floated in this liquid, and so it can not be used with the Thoma-Zeiss counting chamber, as the plates and the lines are not in focus at the same time. This led to the construction of a special counting chamber by Helber.[36] Even with this special instrument, Helber does not say that the objection is entirely removed.[37] In using as high an objective as a twelfth, we feel that any fluid of such high specific gravity as to allow the blood plates to float would be extremely inconvenient and would probably introduce an error even when the counting chamber was dispensed with,[38] for the thickness of the layer of blood would be sufficient to keep the plates and the red corpuscles out of distinct focus at the same time. The solution does not keep well, it "must be made fresh every three days, and filtered each time before using."

*Kemp and Calhoun.*—See under "Aldehyd, formic."

*Laker.*—Laker[39] used Hayem's fluid A. See under Hayem.

*Metaphosphates.*—See Helber, Pratt, and Richardson.

*Muir.*—Muir[40] tried a number of different fluids and prefers an aqueous solution of sodium sulphate (specific gravity 1022), colored with methyl violet. We have tried this fluid, combined with formaldehyd, as recommended by Marcano for red corpuscle numerations, and find it effective in that form. We have not tried it in the form used by Muir.

*Petrone.*—Petrone[41] uses an osmic acid fluid containing salt. We do not find a definite formula, but in one place he gives the strength of the osmic acid as 1:300.

*Pizzini.*—Pizzini[29] used 1 per cent. osmic acid colored with methyl violet. He says that antipyretics, especially phenacetin or antipyrin, 25 centigrams to 100 c.c. of water, using heat to effect the solution, have the power to preserve blood plates almost like a solution of osmic acid.

*Pratt.*—Pratt[9] first used a 10 per cent. solution of sodium metaphosphate. He[9] later used a 5 per cent. solution of the same salt, and in his last communication,[42] presented at the same meeting with this work, he recommends a fluid made in accordance with a formula which we quote as follows:

| | |
|---|---|
| Sodium metaphosphate (Merck) | 2.0 gm. |
| Sodium chlorid | 0.9 gm. |
| Distilled water | 100.0 c.c. |

We have never used sodium metaphosphate solutions for numeration experiments, but we have had considerable experience with them in repeating the work of Deetjen on the alleged ameboid movements of the blood plates.[43] We have found that all these solutions are very prone to ferment and to become mouldy. Helber states that they should be made fresh at least every three days, while Richardson says a week. Pratt's work has been painstaking and valuable, and his partiality for sodium metaphosphate leads us to believe it may have some special merit. We, therefore, propose to try this salt in combination with sodium chlorid and formaldehyd. This would have the double advantage of placing such a fluid in the more certain class of fixatives and of preventing fermentation and molding altogether.

*Prus.*—The original paper of Prus is in Polish, so we were not able to consult it. The only German abstract[44] which we have seen does not give the method in detail, but van Emden[4] recommends the use of Prus' fluid, so we take it for granted that he used the Prus method. This is really the pipette method, but using a fluid which preserves the plates and decolorizes the red corpuscles. With the red corpuscles thus eliminated from obstructing the view, one can use a dilution as low as 1:20 or even 1:10. According to van Emden, this brings an enormous number of plates into the field and reduces the error so greatly that the plates which are lost by sticking to the sides of the pipette may be ignored. By using a refrigerated pipette, van Emden can bring this error practically to *nil;* for at zero centigrade the plates will not adhere.

The recipe for Prus' fluid, as quoted from van Emden, is as follows:

| | |
|---|---|
| Sol. acidi osmici (1 per cent.) | 10 c.c. |
| Sol. acidi chromici (0.1 per cent.) | 10 c.c. |
| Acidi acetici glacial | 1 c.c. |

We have not used this method, but we are impressed with the advantage of counting a large number of plates and thus reducing the error. The inconvenience of refrigerating the pipette will always be a drawback in clinical work, and without this we should always distrust the method, for the error varies with the temperature and the time it takes to measure the blood. Moreover, the pipette method not only holds back plates by adhesion, but tends to clump those which go free. In using Prus' fluid, van Emden mentions a precaution which is significant, and which tends to shake one's confidence in the method. He says that vigorous shaking in the melangeur produces a large number of small highly refracting bodies which might be mistaken for blood plates. He attributes what he calls a high count by Prus (500,000 per cu. mm.) to this cause

*Reyne.*—Reyne[45] criticises the iodized serum of Max Schultze (used by Hayem) as a fluid for examining or

35. Hayem: "Leçons sur les maladies du sang." Paris, 1900, p. 103.
36. See J. under Methods.
37. Bei dieser Kammer fällt die lästige Durchmusterung der verschiedenen Höhenlagen *fast* weg. (The italics are ours.)
38. See K. under Methods.
39. Laker: Sitzungsberichte der Kaiserl. Akad., Vienna, Part III, 1886, vol. xciii, p. 22, footnote 3.
40. Muir: Jour. of Anat. and Physiol., 1891, vol. xxv, p. 259.
41. Petrone: Il Morgagni, 1897, vol. iii, pp. 308, 399 and 409.
42. Pratt: THE JOURNAL A. M. A., 1905, vol. xl, p. 2002.
43. Kemp and Stanley: Amer. Jour. of Physiol., 1901, vol. v, p. iv.
44. Centralbl. f. k. Med., 1887, vol. viii, p. 469. The original paper appeared in Medycyna (Polish), 1886, Nos. 39 and 40.
45. Reyne: Thèse de Paris, 1881, pp. 18-19.

counting the plates. He says it is unreliable. "Some specimens are good and others are absolutely bad without one's knowing why or how to remedy it." Reyne uses diabetic urine containing from 6 to 7.5 per cent. glucose. This is boiled and filtered through animal charcoal. To this liquid thus decolorized is added 5 to 6 per cent. of its weight of "eau oxygenée à 12°" (peroxid of hydrogen?). This preserves the corpuscles and does not deform the plates. The only objection that he urges to it is that it forms small bubbles of gas on standing. See, also, Hayem above.

*Richardson.*—Richardson[46] used Laker's method with the following solution:

| | |
|---|---|
| Sodium metaphosphate | 1.5 |
| Sodium chlorid | 0.8 |
| Distilled water (sterilized, cold) | 100.0 |

Filter and add, if desired, a small amount of gentian violet or brilliant cresyl blue. The solution will not keep well for over a week and should not be used if mold develops in it.

*Salvioli.*—Salvioli[16] used a fluid made according to the following formula:

| | |
|---|---|
| Osmic acid (1 per cent.) | 1 part. |
| Sodium chlorid (0.7 per cent.) | 3 parts. |
| Aqueous solution of methyl violet, q. s. | |

This is practically the same as Bizzozero's counting fluid. See Bizzozero and Acid, osmic, above.

*Van Emden.*—See Prus, above.

### III. AUTHORS' METHOD IN DETAIL.

The fluid used in this method has been described under Aldehyd. The following apparatus and accessories should be ready for use before making the puncture to draw the blood:

Microscope with nose-piece, and at least one objective of low power, not lower than two-thirds; and one of high power, not lower than a one-sixth. A Thoma-Zeiss outfit for counting red corpuscles (two counting chambers would be preferable). Several thoroughly cleaned watch glasses (deep facet-form, about 25 mm. diameter, most convenient). One such watch glass full of the aldehyd fluid. One such watch glass containing three or four drops of this fluid. A glass rod about 5 mm. in diameter, about 15 cm. in length, and rounded at the ends. A clean soft towel. A clean handkerchief or rag, soft and unstarched.

In collecting blood for counting the blood plates, the great desideratum is that all parts of the blood drop shall come in contact with the aldehyd before touching any foreign object (surface of skin, glass, etc.). This is really a *sine qua non*, for otherwise some of the blood plates will adhere to the foreign body, and of those which go free some are sure to be found clumped.

If the finger is to be used for the puncture, the hands are washed with soap and water and dried thoroughly several minutes before the experiment. This is to allow the circulation in the finger to become normal. If the hands are clean this washing is unnecessary. A minute or two before the puncture is made the finger is dipped for, say half a minute, in a solution of carbolic acid, about 1 per cent., rinsed with clean tepid water and dried on a clean soft towel or handkerchief. This is also unnecessary, but it prevents soreness following the puncture, and when the fingers are pricked several times a day, for days or weeks continuously, it is a point well worth taking into consideration. Washing with absolute alcohol, followed by ether, is an unnecessary trouble. The finger must be thoroughly dry, however, otherwise the drop will spread. The best place to make the puncture is on the thumb side of the left index finger, a little distal to the root of the nail, and decidedly more towards the palmar than the volar surface. Make the puncture (most conveniently done with the ordinary spring-lance with a spear-shaped blade), and try to regulate the depth so that blood will just not flow without gentle pressure being applied to the finger. The method of procedure now differs according to the depth of the puncture. If the blood emerges the moment the lancet is withdrawn, it should be wiped away promptly with a clean rag, leaving no trace of blood on the skin. If the observer is working alone, on his own finger, a situation like this is inconvenient. He may do one of two things: either make a fresh puncture, not so deep, on another finger and proceed as will be described below for puncture of the proper depth; or he may fill a fresh watch glass about one-third full of the aldehyd fluid, and then, after wiping all blood from the finger, touch the point of puncture to the surface of this aldehyd, and withdraw the finger the instant a fresh drop of blood emerges. The blood and aldehyd are then mixed thoroughly for a few seconds with the glass rod, which must be scrupulously clean, and a large drop of the mixture transferred on the rod to the counting chamber.[47]

This transfer must be accomplished rapidly. A thin clean cover-glass is now laid on, and the chamber allowed to rest quietly for five minutes before counting. This method will give good results, but one can judge better the mixing of the blood and the aldehyd if the puncture is just of sufficient depth for the blood not to flow without gentle pressure. In this case, if working alone, the puncture having been made, proceed as follows:

Twist the handkerchief into a rope. Hold the left hand thumb uppermost, and place the handkerchief in the crotch between the thumb and index finger, with about 15 to 20 cm. lying across its palm, and the rest hanging over its back. Now hold the index finger straight and close the other fingers to grasp the handkerchief firmly in the palm. Wrap the handkerchief two or three times around the index finger, beginning at the base and stopping at the last joint; then pass the rest of the handkerchief across the palm and hold it in place with the free fingers. This should be so regulated as not to exert any marked pressure on the index finger, which is kept straight all the while. If any blood has appeared from the puncture, wipe it off thoroughly, with the free end of the handkerchief. Dip the rod in the watch glass full of the aldehyd fluid, and convey about three good-sized drops to the surface of the finger over the puncture. Now bend the last joint of the index finger, and press against the end of the thumb if necessary. This will cause a drop of blood to exude into the aldehyd. Mix the two *in situ* by passing the end of the rod gently across the top of the blended drop. Do not force the rod into the drop so as to crowd the rod against the blood, or the blood against the finger. Do all this rapidly, and then, on the rod, carry a drop of the blended fluids to the watch glass containing a few drops of aldehyd. Here mix again, without hesitating to dip the rod in liquid, for the plates are fixed by this time, and the watch glass is simply a convenient vessel for farther dilution. Now carry on the rod a large drop of the diluted blood to the counting chamber, and lay on the cover-glass. The same manipulations that apply for getting an even distribution of the blood in erythrocyte counts apply here. The height of the chamber and the flatness of the cover-glass have no bearing on the accuracy, for the object is not to count the absolute number of anything in a known volume, but simply to determine the ratio of the plates to the red corpuscles. After the cover-glass is in position, take a bird's-eye view of the field, first with the low, then with the high power. If the corpuscles are fairly well distributed, allow the chamber to rest quietly for five minutes before counting.

The beginner is apt to take too much blood and not to dilute it enough. The dilution should be such that the red corpuscles do not conceal the plates when both shall have settled to the bottom of the chamber. There should not be more than one or two plates to a small square on the ruled area. The plates settle more slowly than the red corpuscles; hence the five minutes' wait. A longer wait does no harm, for both blood plates and

46. Richardson: Journal of Med. Research, 1904, vol. xiii, pp. 99-102.

47. Salvioli employed a rod coated with paraffin, though for a somewhat different method. We find that for our purpose it is not necessary to use paraffin, but the rod must be clean and smooth, and must be wet with aldehyd before it touches the blood.

red corpuscles are fixed and preserved by the aldehyd. While the chamber is standing for the settling of the blood plates, we may proceed to numerate the red corpuscles in a different counting chamber, or, if the size of the corpuscles be normal, as in healthy blood, by the hematocrit. The aldehyd fluid we use for the plates makes an excellent counting fluid for the reds, so that no other need be prepared.

It is our custom to count both red corpuscles and plates in six frames of sixteen small squares each. This usually gives about 100 blood plates. In this matter we are guided by our judgment, just as when counting the red corpuscles. If a bird's-eye examination shows the plates and corpuscles to be evenly distributed, and four frames in different parts of the field all give the same ratio, we have, in a few instances, stopped with four frames, while if the distribution was not so regular we have sometimes counted the whole sixteen.

It is a serious mistake to count too few, especially when there is no ruled field under the corpuscles to give an idea of their distribution. The work of some authors is open to this criticism. Petrone,[48] for instance, in one of his experiments, bases his ratio on as few blood plates as thirty-two. This, we feel, is too small a number to eliminate the error of chance-distribution. When, as in some diseases, the number of blood plates is abnormally low, a larger number of frames should be counted.

Our method of numerating the blood plates without using the Thoma-Zeiss chamber has been given.[49] Our experience in this work has been large. We have used it for the past five years in repeated observations on the number of blood plates in blood of twenty-three different healthy individuals; in experiments on the disappearance of the blood plates during coagulation, in which we employed the method of fractional defibrination,[50] and in an extensive work on the regeneration of blood after hemorrhage—which is yet unpublished.

We were also members of a party of six which went from the University of Illinois to Cripple Creek and Pike's Peak to study the effect of altitude on the blood. In this work we made daily counts of the blood plates for all six of the party for six weeks. A preliminary report of this research is all that has thus far been published.[51] As a result of this experience we can assert that we have a method which is practical, and which is accurate to such a degree that it will detect many changes in the blood of pathologic cases; changes which should be of value in diagnosis and in prognosis, as well as in etiology.

## IV. THE NUMERATION OF THE BLOOD PLATES IN PHYSIOLOGY.

Numeration experiments on the blood of normal individuals have yielded widely different results. We believe this to be due, in the first place, to the different methods employed. This is the explanation which has almost invariably been given, and we do not wish to underestimate its importance, but we are now in the possession of data obtained from our own experiments which lead us to believe that there is another factor which, so far as we know, has been hitherto overlooked, viz., the season and place in which the experiments were made. Our researches have included work done in France, in Switzerland and in different parts of America. In company with Messrs. Stanley, Hayhurst and Draper, we formed a party which went from the University of Illinois to the Rocky Mountains to study the

| OBSERVER. | Ratio one blood-plate to reds. | Thousand blood-plates per cu. mm. | For method see Section 1 under letter | Number of persons | Number of counts. |
|---|---|---|---|---|---|
| Afanassiew[52] | 25 to 18 | 200 to 300 | E | 2 | 24 |
| Bizzozero[53] | 25 to 12 | 210 to 400 | G and H | 2 dogs | 12 |
| Brodie and Russell[26] | 9.4 to 7 | 635 | G and K | ? | ? |
| Cadet[*48] | ..... | 100 to 310 | E | 108 | † |
| Determann[55] | 30 to 18 | 167 to 278 | G and H | 25 | † |
| | mean 22 | mean 227† | | | |
| Fusari[56] | ? | 180 to 250 | E[??] | ? | ? |
| | | mean 200 | or G | | |
| Hayem[54] | 20 | 200 to 300 | E | 108 | † |
| Helber[59] | ..... | 192 to 264 | E and J | 24 | ? |
| Howlett[24] | ..... | 250 to 300 | ? | few | few |
| Kemp[57] | 10.5 | 457 | G and H | 1 | 5 |
| Kemp and Calhoun[24] | 5.6 | 850 | G and H | 13 | 20 |
| Kemp and Calhoun[58] | ? | 730 to 962 | G and H | 19 | 7 |
| | | mean 841 ? | | | |
| | | 349 to 461 | | | |
| Kemp and Calhoun[58] | ..... | mean 381 | ..... | 10 dogs | 15 |
| Laker[6] | ? | 400 and over | G and H | guinea pigs | † |
| Muir[‡59] | ..... | 200 to 250‡ | E | ? | ? |
| Oster[60] | ? | 250 to 300 | ? | ? | ? |
| Petrone[61] | 19 | ? | ..... | 5 dogs | † |
| Pizzini[29] | 15.5 | 300§ | G and H | ? | ? |
| Pratt[62] | 35 to 10[¶] | ..... | ..... | ..... | ..... |
| Pratt[63] | 24 to 10 | 217 to 496 | G and K | ? | |
| Prus[44] | ..... | 500 | ** | ? | ? |
| Richardson[46] | 8†† | 700 | G and K | rabbits | † |
| Salvioli[64] | 55 to 20 | 175 | G and K | 3 rabbits | 3 |
| Salvioli[64] | 30 | 213 | G and K | 1 guinea pig | 1 |
| Salvioli[64] | 36 to 40 | 207 | G and K | 2 dogs | 2 |
| Van Emden[65] | ..... | 245 | F and H | ? | ? |

* We regret that we have mislaid most of our notes on Cadet's counts. His paper is for the present inaccessible, so we quote him indirectly through Hayem, and van Emden. His tables include the work of Hayem and some of his students, as well as Cadet's own. Hayem says that any plate count which does not fall between 200,000 and 300,000 must be considered abnormal.

† Determann does not give actual figures; we have calculated them from the ratio for the sake of comparison.

‡ Muir gives these figures as a mean, and says that considerable latitude must be allowed on each side. He does not give the extremes. Muir also worked on dogs, but we have not his figures for these experiments in our notes, and Muir's paper is inaccessible to us at present.

|| Oster is quoted by Helber, without giving reference to the original work, so we are unable to consult it.

§ These figures are calculated by us from Pizzini's tables. They are means.

¶ Pratt gives these ratios, but indicates that there is a much wider divergence. For this reason we have not calculated the number of plates represented by them. The actual plate counts which Pratt gives in this paper range from 217,000 to 496,000.

** For Prus' method see under Prus, in section on Methods.

†† Calculated from Richardson's chart.

52. Afanassiew: Deutsch. Arch. f. klin. med., vol. xxxv, pp. 233-234.

53. Bizzozero: Zeitsch. f. wis. Mikroscopie, 1892, vol. ix, p. 232; also Arch. ital. de Biol., 1841, vol. xvi, pp. 389, 390.

54. Cadet: Thèse de Paris, 1881. Quoted from Hayem, "Du Sang," Paris, 1889, pp. 167, 374. Also van Emden: Fortsch. d. Med., 1898, vol. xvi, p. 250.

55. Determann: Deutsch. Arch. f. klin. med., 1898, vol. lxi, p. 371.

56. Fusari: Arch. per le scienze mediche, 1886, vol. x, p. 247.

57. Kemp: Proc. Amer. Physiol. Soc., Amer. Jour. of Physiol., 1902, vol. vi, p. xi.

58. Kemp and Calhoun: Arch. ital. de Biol., 1901, vol. xxxvi, p. 83.

59. Muir: Jour. of Anat. and Physiol., 1891, vol. xxv, p. 273.

60. Oster: Quoted from Helber, Deutsch. Arch. f. klin. Med., vol. lxxxi, p. 320.

61. Petrone: Il Morgagni, 1897, vol. xxxix, p. 309.

62. Pratt: Arch. f. exp. Path. u. Pharm., 1903, vol. xlix, p. 304.

63. Pratt: Jour. Med. Research, 1903, vol. x, p. 124.

64. Salvioli: Virch. Arch., 1891, vol. cxxv, pp. 378, 393, 394.

65. van Emden: Fortsch. d. med., 1898, vol. xvi, p. 250.

48. Petrone: Il Morgagni, 1897, vol. xxxix, p. 389.

49. See K and H under Methods.

50. Kemp and Calhoun: "La numération des plaques du sang act la relation des plaquettes et des leucocytes avec la coagulation." Arch. ital. de Biol., 1901, vol. xxxvi, p. 82.

51. Kemp, Stanley, Hayhurst, Harris, Calhoun and Draper. Report of an Expedition, etc., Am. Jour. of Physiology, February, 1904, vol. x, p. xxxii. In the presentation of our paper at the Portland session, I gave a considerable account of this altitude work, and still more was brought out in the discussion. It was expected that I should incorporate a full report in the present publication, and it was my intention to do so. I regret, however, that pressure of other work has prevented me from bringing the literature up to date, and from preparing the manuscript. This must, therefore, be reserved for a future publication.—Kemp.

effect of altitude on the blood. We found that high altitudes have a profound effect on the blood plates; their number is enormously increased, even more than that of the red corpuscles. The full report of that expedition has not been published,[51] but all notes taken at this time have been worked up, and we may anticipate our report by saying that we believe there are other climatologic conditions beside altitude which affect the blood plates and their relation to the red corpuscles. This will be discussed further on in the present communication, but it is well to bear it in mind in comparing the discrepant results which have been obtained by observers in the past.

For convenience of comparison we have compiled the preceding table. The date of the observation can be told by referring to the literature in the footnote. The actual number of blood plates may be obtained by multiplying the number in column 2 by 1,000. The method employed is given in the third column. The fluids used may be found in connection with the names of the observers arranged in alphabetical order under Fluids. Each method and each fluid is criticised in accordance with our experience, so we will not comment further on the relative value of the results. A word of caution is necessary in comparing the results in Column 2. Some of the observers have given the maximum and minimum counts which they have ever obtained. Others have given the limits within which they usually find the blood plates to vary. The means in either case are safe to follow; where no mean is given, it indicates that the observer has likely not stated his actual highest and lowest counts.

On comparing the results in Column 2, it becomes apparent that the results of Kemp and of Kemp and Calhoun are more widely divergent than those of any other observer. These facts were, of course, known to us before the figures were tabulated. Without an adequate explanation they would prove that our method could not be relied on. As a matter of fact, however, in examining our records to find an explanation, if possible, we have come on a new and valuable generalization. In our observations (12 in the table) it will be noticed that the plate count for dogs is lower than that for man. On general principles this should not be true, and it occurred to us later that possibly the season might have something to do with it. The plate counts which we had recorded on human blood were practically all made during the winter. The work on the dogs was done in May, June and July in connection with some experiments in fractional defibrination. On looking over our records for human blood we find this fact: that the ratios we have determined in winter have almost invariably been higher than those we found in summer. Moreover, there is less variation from day to day in winter than in summer. This is strikingly shown by some observations which we made in Champaign and Urbana, Ill., before going to Cripple Creek and Pike's Peak to study the effect of altitude. The ratio of plates to reds for the six in the party is given in the following table:

RATIO OF PLATES TO REDS.

| Date. | Kemp. | Stanley. | Hayhurst. | Harris. | Calhoun. | Draper. |
|---|---|---|---|---|---|---|
| July 7.... | 1 : 44 | 1 : 19 | 1 : 20 | 1 : 23 | 1 : 18 | 1 : 22 |
| July 8.... | 1 : 40 | 1 : 18 | 1 : 19 | 1 : 20 | 1 : 18 | 1 : 19 |
| July 9.... | 1 : 36 | 1 : 21 | 1 : 20 | 1 : 20 | 1 : 20 | 1 : 20 |

NOTE.—The variations in Kemp's record are excessive. Nothing comparable to them had been observed in his blood during the winter.

Exactly the same thing holds good at high altitudes, only there we have an increase in the red corpuscles, by the side of a still greater increase in the plates. At high altitudes the variation from day to day in the blood plates of a given individual was remarkably small. In some observations made by one of us (Calhoun) at Escanaba, Mich., during a long-continued spell of dry, very cold weather, it was found that the blood plates behaved much as they did at a high altitude—that is, they not only increased in number, but increased in size. The counts given by Kemp (10 in the table) were made in Paris during the summer. The previous winter counts on his blood were part of the observations of Kemp and Calhoun (12 in table), when the ratio and the plate counts in his blood ran nearly twice as high. A given altitude in the Alps, surrounded by snow, produced a different effect from a corresponding altitude in the Rocky Mountains at the same time of the year. There is great need for careful researches in this field, and they should be long continued and not fragmentary. We propose to continue them ourselves as opportunity affords.

Before passing from this subject we should like to say a word concerning the results which we have quoted from our experiments before going to the mountains. The ratios 1:44 and 1:40 are the highest we have ever obtained for normal blood, and they stand almost alone. The man (Kemp) on whom the count was made was apparently in perfect health, and there was absolutely nothing subjective to indicate such a condition except the oppressively hot and sultry weather. The count is undoubtedly correct; it was verified by three of the party working on blood from punctures in three different places. In all there were five separate counts made on that blood and they all agreed. It is interesting to note that both red corpuscles and hemoglobin were far from normal also, the red corpuscles were 4,400,000, the whites 4,500, the specific gravity 1061.5, and the hemoglobin 56 on the Fleischl scale.

One important fact is set forth by this, viz., that a single abnormal blood plate count should not be taken as indicating a serious pathologic condition. The count of the blood plates for that day was 100,000, and we will see in the section on pathology, which is to follow, that this would have been taken as an indication of a condition more or less serious.

MEALS AND DIGESTION.

The effect of meals on the count of the blood plates has been studied by a number of observers, but their results are not on accord. The experiment most frequently quoted to show that the number of blood plates is influenced by digestion is that of Hayem,[66] who made observations on two adults and one infant. For the adults he found the number of blood plates to be as follows:

| | |
|---|---|
| First adult— | |
| Morning, fasting | 216,500 |
| One hour after first breakfast (café au lait)* | 216,500 |
| One and one-half hours after this breakfast | 350,000 |
| One and one-fourth hours after second breakfast† | 185,000 |
| Three and one-fourth hours after second breakfast | 198,000 |
| Four and one-half hours after second breakfast | 231,000 |
| Second adult— | |
| Morning, fasting | 186,000 |
| One and three-fourths hours after first breakfast (as above) | 218,000 |

*This probably consisted of two large cups of hot milk with coffee and one or two French rolls with butter and honey or jam.

†This corresponds to our (hot) lunch, usually taken about 11 o'clock.

With the exception of the isolated count of 350,000 we believe all the other figures to be within the limits of error, and the second case shows no such rise to prove that the first was due to digestion. Hayem is properly conservative in discussing these results,[67] so that he is really misquoted when he is

66. Hayem: Arch. de Physiol., 1878, vol. v, p. 723.

67. Ce n'est qu'un aperçu très-imparfait de l'influence des repas. . . . Il sera necessaire de faire un très-grand nombre d'observations . . . car les hématoblastes ne sont jamais répartis d'une façon très-égale dans la préparation.

placed with those who think that digestion influences the number of plates in the blood. We have before us notes from the records of several observers who have investigated this question, but except in prolonged hunger or after a "gorge" no results have been obtained which are not within the limits of error, so we shall not take the space to quote them.

Our own observations have been confined to the effect of the noonday meal. For some of the subjects this was lunch (corresponding to Hayem's "second breakfast"); for others it was dinner. The afternoon counts tend to be a trifle lower than those of the morning, but they were within the limits of error, so we agree with those who say that meal time, as such, has no effect on the number of plates in the blood. On Pike's Peak (altitude 14,200 feet) we noticed enormous differences between morning and afternoon counts, but we do not believe that mealtime had anything to do with this, for we all ate a hearty breakfast and no counts were made fasting.

## V. THE NUMERATION OF BLOOD PLATES IN PATHOLOGY.

We are strongly of the opinion that the blood plates, in pathology, offer a field for investigation which is unusually attractive in its promise of good results. This field is like a rich country which has been undeveloped owing to the lack of railroads. The methods which have been employed heretofore in numerating the blood plates have been either inaccurate or laborious or both. We believe that our method removes each of these objections to a large extent, and we trust it will be of service in opening up the new territory.

The literature on the numeration of blood plates in pathology is becoming voluminous. It contains records of some work which is of great value, and of some which is almost if not quite worthless, owing to faulty methods. On the other hand, some of the observers who have employed faulty methods have accompanied their records with clinical histories which are very complete, and their findings for the blood plates are, on the whole, interesting and suggestive in spite of errors of experimentation. We first attempted to classify this work under the heads of the different diseases, but gave it up, as it would require such a discussion of individual cases as to be far beyond the scope of a general paper on the subject. We next attempted to classify the work under the heads of diseases in which the plates are increased and those in which they are decreased in number. We abandoned this, also, because it would do more harm than good simply to quote A, B and C as finding that the plates were increased in erysipelas, for instance, while D, E and F found them to be decreased. This has been done in existing literature, and on consulting the original papers we find that A employed a method which could not be trusted; that B makes his statement from observations on only one case, while C gives clinical histories showing complications which would certainly have to be allowed for. We have gone over all the literature which we have seen recorded, and, therefore, hope that we are reporting the subject up to date. After deliberate consideration we are convinced that the best way to present this information is by authors, arranged in alphabetical order. The reference in the footnote will give the year. We will state the method and the fluid employed, so that one may judge of the accuracy of the experiment by referring to the first section of this article for the method, and to the second section for the fluid. We will also state the number of cases reported by a given author, and the footnote will show by page where these records may be found. The list of diseases investigated by each author will be given in the same order as it appears in his paper. This will save undue multiplication of footnotes. The study and criticism of the case records, etc., in any given disease, must be left to those who are making that disease a special subject of investigation. There are a few general points which seem to be concurred in by practically all observers. These will be given at the close of the article in the summary.

AFANASSIEW.—Afanassiew[68] used the pipette method (E) with Afanassiew's fluid. He reported cases as follows:

| | | | |
|---|---|---|---|
| Leucemia | 1 case | Erysipelas, facial | 1 case |
| Typhoid fever | 5 cases | Pleurisy, suppurative | 1 case |
| Gastric ulcer | 2 cases | Icterus gravis | 1 case |
| Anemia, chronic | 1 case | Scurvy | 1 case |
| Tuberculosis | 1 case | Pneumonia, croupous | 1 case |
| Cachexia, malarial | 1 case | | |

AOYOMA.—Aoyoma[69] makes no count and gives no special method. His method is presumably A, Section 1. He states that the blood plates are increased in bubonic plague.

CADET.—Cadet[70] used the pipette method (E), with fluids described under "Cadet." He reported pathologic cases, especially continued fevers.[70]

DENYS.—Denys[71] did not make actual counts. The method used is not stated. He reported four cases of purpura hemorrhagica.

DETERMANN.—Determann[72] used the ratio method (G and H), with Bizzozero's fluid. He reports 85 pathologic cases, and gives clinical and postmortem notes. His cases are:

| | | | |
|---|---|---|---|
| Fibroma | 1 case | Chlorosis | 5 cases |
| Struma parenchymatosa | 1 case | Anemia | 1 case |
| Phthisis pulmonalis | 8 cases | Hemorrhage (chronic) | 2 cases |
| Bronchitis (acute) | 4 cases | Sarcoma | 1 case |
| Emphysema | 1 case | Serositis tuberculosa | 2 cases |
| Heart disease, (different forms) | 2 cases | Peritonitis (perforation) | 1 case |
| Syphilis | 1 case | Tuberculosis (bones and joints) | 4 cases |
| Lead poisoning (chronic) | 1 case | Anus preternaturalis | 3 cases |
| Gastric catarrh (chronic) | 1 case | Empyema (rib-resection) | 1 case |
| Nephritis (chronic), interstitial | 2 cases | Pregnancy | 8 cases |
| Polyarthritis deformans | 1 case | Childbirth | 2 cases |
| Sclerosis, (multiple) | 1 case | Infancy (newborn) | 3 cases |
| Cerebral tumor | 1 case | Icterus neonatorum | 1 case |
| Spinal disease (chronic) | 2 cases | Pyemia | 1 case |
| Hysteria | 1 case | Typhoid fever | 4 cases |
| Apoplexy | 1 case | Erysipelas | 1 case |
| | | Rheumatism, (acute art.) | 2 cases |
| | | Pneumonia | 7 cases |

FUSARI.—Fusari[73] used the pipette method (E), with fluids recorded under Fusari. He reports the following cases:

| | | | |
|---|---|---|---|
| Pneumonia | 3 cases | Sea-sickness | 3 cases |
| Typhoid fever | 3 cases | Scurvy | 2 cases |
| Intermittent fever | 4 cases | Ankylostomiasis | 2 cases |
| Articular Rheumatism | 1 case | Pseudoleucocythemia | 2 cases |
| Pleurisy | 2 cases | Leucocythemia | 1 case |
| Nephritis | 3 cases | Anemia | 6 cases |
| Ascites | 1 case | Chlorosis | 5 cases |
| Tuberculosis | 5 cases | | |

GRAWITZ.—Grawitz[74] reports that he has found the plates to be increased in chlorosis. He uses the expression *"soweit man nach Schätzungen urtheilen darf,* and when criticising the results of previous observers who had made actual numerations, he mentions no method of his own, so we surmise that he used method A as already described.

HALLA.—Halla[75] uses the method of direct examination (A); but he is so conservative that we quote him to show that some results even when obtained by a faulty method may be of value. He says: "Familiar as I was with the blood plates, I could not help noticing them in my examination of the blood (for other purposes) in pathologic cases." He goes on to say that he does not attempt any exact count, but by rapid examination of the blood, as soon as possible after it is drawn, before the plates have greatly altered in shape, he could de-

68. Afanassiew: Deutsch. Arch. f. klin. Med., 1894, vol. xxxv, pp. 236-239.

69. Aoyoma: Mitthellungen aus d. med. Fac. d. Kaiserlich-Japanischer Univ., Tokio, 1895, vol. iii, pp. 219, 220.

70. We regret that our notes on his pathologic cases are mislaid and that his article is now inaccessible to us.

71. Denys: Centribl. f. allg. Path. und path. Anat., 1893, vol. iv, pp. 175, 177.

72. Determann: Deutsch. Arch. f. klin. med., 1898, vol. lxi, p. 371 et seq.

73. Fusari: Arch. per le scienze mediche, 1886, vol. x, p. 249.

74. Grawitz: "Klinische Pathologie des Blutes," 1896, pp. 45 and 80.

75. Halla: Zeitsch. f. Heilkunde, 1883, vol. iv, pp. 231, 232, 331 et seq.

termine "without difficulty," whether the number of plates was above or below the normal. We would be inclined to doubt this, especially the "without difficulty," and to feel that Halla's observations were too finely drawn, but when he states, further, that "only the grossest, most striking quantitative changes" were taken into account, we feel that such generalizations, based on a sufficiently large number of observations, are not to be discarded as entirely without value. The pathologic cases which he reports are the following:

| | | | |
|---|---|---|---|
| Pnuemonia (croupous) | 14 cases | Meningitis (suppurative) | 1 case |
| Pleurisy (acute) | 1 case | Tonsillitis | 1 case |
| Tuberculosis, "very many" (number not given) | | Smallpox | 1 case |
| Peritonitis (acute) | 2 cases | Scarlet fever | 1 case |
| Rheumatism (acute articular) number of cases not given | | Malaria fever (tertian) | 1 case |
| Erysipelas (facial) | 2 cases | Typhoid fever | 15 cases |

HAYEM.—Hayem used the pipette method (E), and several different fluids which are described under his name. His publications on pathologic cases are scattered through a wide literature, but he has gathered his results in his classic large monograph,[76] and his findings in the different diseases may be consulted in the proper chapters. He has also published a later work[77] in which he brings his treatment of the subject up to date. Hayem may be said to have re-discovered the blood plates,[77] and his earlier work was the starting point for the modern study of those elements. His hematoblast theory has not met with acceptance, but, apart from this, his pioneer researches on anemias,[78] on purpura hemorrhagica[78] and on a blood crisis[80] in certain fevers[81] have yielded results which have been confirmed by nearly every later observer, whatever has been the method employed. (See summary, at the end of this article).

HELBER.—Helber[82] used the pipette method with a special counting chamber. These are described in methods E and J. The fluid he used is described under his name. He reports the following cases:

| | | | |
|---|---|---|---|
| Anemia (simplex) | 4 cases | Hysteria and neurasthenia | 5 cases |
| Anemia (schwer) | 5 cases | Sclerosis (multiple, complicated) | 1 case |
| Chlorosis, number of cases not given. | | Gangrene of lung | 1 case |
| Pseudoleucemia | 1 case | Spondylitis | 1 case |
| Purpura hemorrhagica | 1 case | Basedow's disease | 1 case |
| Tuberculosis, number of cases not given. Six cases described particularly. | | Typhoid fever | 1 case |
| | | Scarlet fever | 1 case |
| Carcinoma | 3 cases | Erysipelas | 1 case |
| Stomach and intestinal diseases, (chronic), number of cases not given. | | Sepsis, number of cases not given. | |

HOWLETT.—Howlett[83] used the pipette method (E), with Gowers' hemocytometer for counting the plates in normal blood. He reports one case of pernicious anemia, in which he says the number of plates was sometimes normal and sometimes away below. He does not say he counted the blood in this case and from the context we judge that he used method A, B, or D. If D, he probably diluted with Hayem's solution A.

LAPTSCHINSKY.—Laptschinsky[84] did not count the plates. His experiments were mostly on ordinary wet preparations and he refers to the "granular masses of Max Schultze" rather than to the isolated plates. This work was before Hayem's paper which brought the plates into prominence.

MUIR.—Muir[85] used the pipette method (E). His fluid is described under his name. He has examined pathologic blood in "upwards of one hundred cases." The results of many of these examinations he has not published, but the more important ones he has tabulated and often has added very full notes. His tabulated and annotated cases are as follows:

| | | | |
|---|---|---|---|
| Hemorrhage | 9 cases | Leucocythemia | 3 cases |
| Anemia (pernicious) | 12 cases | Lymphadenoma | 7 cases |
| Chlorosis | 14 cases | Cases with high temperature | 5 cases |
| Anemia (secondary) | 11 cases | | |
| Anemia (miscellaneous) | 5 cases | | |

PIZZINI.—Pizzini[86] used the ratio method (G and H), with an osmic acid fluid as described under his name. The pathologic cases examined by Pizzini were as follows:

| | | | |
|---|---|---|---|
| Tuberculosis | 3 cases | Cancer (stomach) | 1 case |
| Rheumatism (articular acute) | 2 cases | Cirrhosis of liver (with ascites) | 1 case |
| Diabetes | 1 case | Mitral stenosis | 1 case |
| Pneumonia | 4 cases | Aortic insufficiency | 1 case |
| Pleurisy (with old effusion) | 1 case | Erysipelas (facial) | 1 case |
| Pleurisy (with ascites) | 1 case | Anemia (simplex) | 2 cases |
| Leucemia | 1 case | Tetanus | 1 case |
| Epilepsy | 1 case | Pneumonia (with meningitis) | 1 case |
| Myelitis | 1 case | Malaria (tertian) | 2 cases |
| Pleurisy (dry) | 1 case | Malaria (quartan) | 2 cases |

PRATT.—Pratt[87] used the ratio method (G and K), with a fluid described under his name. The pathologic cases which he reports are:

| | | | |
|---|---|---|---|
| Purpura hemorrhagica | 1 case | Chlorosis, number of cases not mentioned. | |
| Leucemia | 8 cases | Erythrocytosis, number of cases not mentioned. | |
| Anemia (pernicious) | 10 cases | *Severe* hemorrhage, number of cases not mentioned. | |
| Anemia (secondary), number of cases not mentioned. | | | |
| Leucemia myelogenous, number of cases not mentioned. | | | |

PRUS.—Prus[44] counted the plates by the pipette method (E and G), but he used a special fluid, described under his name, which made his method unique. He reports four cases on leucocythemia.

PREISICH AND HEIM.—Preisich and Heim[88] report one case of pernicious anemia, in connection with their studies on the origin of the blood plates.

RIESS.—Riess[89] does not count the plates, he simply states whether they are increased or decreased. We infer that he used method A. Riess' work is among the earliest; it was done before any definite method of counting the plates had been suggested. He reports on the following diseases, the number of cases is not given:

| | |
|---|---|
| Anemia (pernicious). | Profuse hemorrhage (repeated). |
| Anemia (simplex). | Leucemia. |
| Chlorosis. | Pseudoleucemia. |
| Cachexias (such as cancer). | |

SALVIOLI.—Salvioli[18] uses the ratio method (G and K). His work was on the blood after severe burns.

SCHLEIP.—Schleip[90] used method D. He reports fifty-seven cases of trichinosis during the Homburg epidemic of 1903.

TÜRK.—Türk[91] used method A. The plates were never counted. The blood was taken undiluted and in thin layers (at a room temperature) and examined as quickly as possible. Türk himself points out that this method is very defective owing to the adhesive properties of the blood plates. He does not attempt to give numbers, but simply speaks of the plates as "reichlich vermehrt," "kaum vermehrt," etc. He also checked his observations by the examination of dry preparations. See method D.

VAN EMDEN.—Van Emden[92] used method F, with Prus' fluid. We feel that his results are trustworthy. His records are accompanied by interesting clinical notes. The cases which he reports are as follows:

| | | | |
|---|---|---|---|
| Scarlet fever | 3 cases | Tuberculosis | 4 cases. |
| Typhoid fever | 3 cases | Tuberculosis (miliary) | 2 cases |
| Malaria | 6 cases | Meningitis (cerebrospinal) | 2 cases |
| Erysipelas | 2 cases | Scurvy | 1 case |
| Cardiac diseases* | 20 cases | Purpura hemorrhagica | 1 case |
| Liver cirrhosis | 2 cases | | |
| Pneumonia, number not given. | | | |

*These cases involve so many interesting complications that we can not classify them here. The reader is referred to the original.

76. Hayem: Du Sang, Paris, 1889.

77. Hayem: Comp. rend. de l'Acad. des Sciences, 1877, vol. lxxxiv, pp. 1239-1242; Arch. de Physiol., 1878, pp. 692-734; Id., 1879, pp. 201-261, and 577-613.

78. Hayem: Gazette méd. de Paris, 1880, pp. 119-120; 191-192; 215-216; Compt. rend. de l'Acad. des Sciences, 1880, vol. xc, pp. 225-228; Id., 1883, vol. xcii, pp. 82-92.

79. Hayem's first plate counts in purpura were in 1890. See "Leçons sur les Maladies du Sang," pp. 527-528.

80. In his earlier works Hayem calls this a *crise hématique;* in his later ones he calls it a *crise hématoblastique.*

81. Hayem: Compt. rend. de l'Acad. de Physiol., 1882, vol. xciv, pp. 200-202. Also, Arch. de Physiol., 1883, vol. ii, pp. 247-256.

82. Helber: Deutsche Arch. f. klin. Med., 1904, vol. lxxxi, p. 320 et seq.

83. Howlett: Lancet, 1882, vol. i, pp. 223-224.

84. Laptschinsky: Centralbl. f. d. med. Wiss., 1874, p. 660.

85. Muir: Jour. of Anat. and Physiol., 1891, vol. xxv, pp. 259 et seq., and 364 et seq.

86. Pizzini: Riforma medica, 1894, vol. ii, pp. 376 and 387 et seq.

87. Pratt: Johns Hopkins Hospital Bulletin, 1905, vol. xvi, p. 201.

88. Preisich and Heim: Virch. Arch., 1904, vol. clxxviii, p. 59.

89. Riess: Berlin. klin. Wochft., 1879, p. 696.

90. Schleip: Deutsches Arch. f. klin. Med., 1904, vol. lxxx, pp. 11-17.

91. Türk: Klinische Untersuchungen, etc., Vienna, 1898, pp. 15, 16, 22, 121, 173, 181, 217, 219, 250, 276, 294, 315, 344.

92. van Emden: Fortsch. d. med., 1898, vol. xvi, p. 282 et seq.

For many other cases not mentioned in his German paper, Van Emden refers to his inaugural dissertation in Dutch, Leyden, 1896.

SUMMARY.

From a great mass of conflicting evidence, most of it obtained by methods of questionable accuracy, we may cull three important generalizations which are almost unanimously agreed on—whether the method of the observer was good, bad or indifferent. We, therefore, feel it safe to predict that they will become established facts. It is interesting, furthermore, to note that these were all pointed out by Hayem, who was the first to make approximately accurate numeration experiments on the blood plates.

The first of these generalizations relates especially to acute infectious fevers; the second, to different forms of anemia; the third, to purpura hemorrhagica. We will consider each in order.

*Acute Infectious Fevers.*—During the course of an acute infectious fever (especially typhoid) the number of blood plates is usually either subnormal or normal. If the fever breaks by crisis, the crisis is accompanied by a rapid and striking rise in the number of blood plates. This is the classical "crise hématique" or "crise hématoblastique" of Hayem. If this "crise hématique" fails to appear, it is the sign of some masked complication which is usually unfavorable. Most observers have found that this is true of all acute infectious diseases, but all are practically agreed on typhoid.[93] The study of the plates in pneumonia has been especially interesting. As a rule, observers have found a marked blood crisis, but they are not in accord as to whether the plates are increased or diminished during the continuance of the fever. On some other fevers there has been a wider divergence of opinion. The study of the leucocytes in fevers has attracted considerable attention. We believe that further investigations on the blood plates in fevers would lead to valuable results, besides being of use in diagnosis and prognosis for the cases under observation.

*Anemias.*—In the different anemias, there is a remarkable concurrence of opinion that the plates may or may not be diminished in secondary anemias—indeed, in most cases, they are reported to be increased; while in pernicious anemia they are always greatly diminished. An increase above the normal in the number of the blood plates excludes the diagnosis of pernicious anemia. If a case under treatment shows an increase in the number of the blood plates, the prognosis is encouraging; if, in spite of all that can be done, the plates continue to fall in number, the prognosis is almost certainly fatal. In this connection we can not do better than quote from the latest work of the veteran observer Hayem,[94] who speaks with especial emphasis on the study of blood plates in anemias. He says: "It is certainly wrong to neglect these elements. When their number becomes small it is always a more or less serious sign; when they become rare the retractability of the clot diminishes. . . . This double lesion rarity of the hematoblasts [blood plates] and loss of retractability of the clot) is a sign of progressive pernicious anemia, and is the most characteristic sign which we have of this protopathic form." If this double sign does not exist, the proper treatment will effect a cure and one of the first signs of improvement is a rise in the number of blood plates. If the case continues to improve, further interesting changes are noted in the relation of the plates to the red corpuscles; small red corpuscles appear in increasing numbers and there is every indication that young red corpuscles are developed from the plates.[95] Hayem's observations, so far as the numerical relations of the blood plates are concerned, have been confirmed by a number of observers, including van Emden and Pratt, whose methods of numeration are free from the objections which apply to the older method of Hayem.

*Purpura Hemorrhagica.*—In purpura hemorrhagica the number of blood plates is enormously diminished. Van Emden and Pratt each state that the lowest counts they have ever found have been in this disease. Hayem called attention to the slowness in clotting of the blood. Helber confirms this observation of Hayem. To distinguish the blood in purpura hemorrhagica from that of pernicious anemia, Hayem[96] says that, in the absence of appreciable changes in form in the red corpuscles, "the scarcity of hematoblasts [blood plates] and the absence of serum after the coagulation of the blood, are two signs which are constant and pathognomonic" of the disease. The few plates which are found are often of large size. The blood contains masses of small plates, but these are broken down. Fibrin threads in the clot are few, but coarse. Recovery is ushered in by a "crise hématoblastique."

93. Van Emden agrees with the rest in finding a "crise hematoblastique" in typhoid, but he says it is much less marked than in pneumonia, scarlet fever, measles, and erysipelas. In malarial fever (Sumpffieber) the "crise hématoblastique" resembles that of typhoid.

94. Hayem: Leçons sur les maladies du Sang, Paris, 1900, p. 328 et seq.

95. Hayem's discussion of this whole question is most interesting; the text is illustrated by a curve showing the changes in the different corpuscles and in the hemoglobin. It will well repay one to consult the original.

96. Hayem: Leçons sur les maladies du Sang, Paris, 1900, pp. 530 et seq., and 540.

## APPENDICITIS; IDEAS CONCERNING ITS MANAGEMENT, BASED ON ONE THOUSAND OPERATIONS.*

VAN BUREN KNOTT, M.D.
SIOUX CITY, IOWA.

It is not my purpose to enter into an exhaustive dissertation on the subject of appendicitis. The field has been most thoroughly covered during the past few years, and so far as its etiology, pathology, symptomatology and diagnosis are concerned, the opinion of the profession may for practical purposes be said to be in accord.

This can not as yet be said, however, concerning the treatment of the disease, as honest differences of opinion still exist, many of them varying only in degree, but sufficiently marked to convey to numerous members of the profession the idea that the treatment of appendicitis is a subject still more or less *sub judice*.

Actuated by the belief that the various phases of the question—how shall we manage our appendicitis patients?—may be best answered by a study of the methods employed by various men, I venture to add my testimony to the large mass of evidence already in print.

During the years 1893 to 1905 inclusive I have operated on 1,024 cases of appendicitis. Of this number 640 were clean cases and 384 were pus cases. By clean cases I mean those in which the infection was still confined within the appendix; by pus cases those in which the infection had escaped from the appendix and established a septic process, localized or diffuse. Of the total

* Read at the annual meeting of the Western Surgical and Gynecological Association, Kansas City, Mo.

number 993 patients recovered and thirty-one died—a mortality rate of 3 per cent. Among the clean cases, acute or chronic, 640 in number, 639 recovered and one died—a mortality rate of one-sixth of 1 per cent. Among the pus cases, 384 in number, 354 recovered and thirty died—a mortality rate of 8 per cent.

It seems no more than fair to state, in passing, that more than half of these operations have been made during the past six years, and the mortality rate secured is because that fact has permitted the application to these patients of greatly improved methods of treatment, among which may be mentioned posture and drainage.

Believing that appendicitis is a surgical disease, I have always been an advocate of immediate operation, and have followed the rule of operating on every case as soon as seen unless the patient was practically moribund, with the exception of some few cases, presumably of mild type, in which the patient presented well-marked contraindications to any surgical procedure and it was thought inadvisable to operate under any circumstances. This, in brief, is the plan still employed, and increasing experience tends to strengthen my belief in it. Every death from appendicitis must be charged to the account of procrastination or negligence, and the responsibility for its occurrence falls on the family of the patient, his medical attendant, or the surgeon. The patient or his family may to some extent evade this responsibility by pleading ignorance. At this late day, and in the light of the vast array of evidence accessible to all, what shall be the excuse of the physician who was called early? It is absolutely impossible for any man, however great his experience, to prognosticate accurately the course of any given case of appendicitis from its inception, but it is within his power to promise speedy and certain recovery to every case of appendicitis operated on sufficiently early.

It is not my intention to take up at length this line of argument, although sufficient excuse for it is found daily in the obituary columns, and the necessity for the appendicitis missionary has by no means ceased to exist.

### CLASSIFICATION OF CASES.

For practical purposes we may divide our appendicitis cases into two classes—clean cases and pus cases—the former including all cases either acute or chronic in which the infection is still confined to the appendix, and the latter including cases in which a septic process, either circumscribed or diffuse, has been established with the appendix as its point of origin.

From the standpoint of results I have found no difference between an acute clean appendicitis and those of the so-called chronic type, as in 640 operations on cases of both varieties made at all stages of the disease where the infection was confined to the appendix, there was but one fatality, and that was charged to the fact that I had the night before operated on a patient suffering with a violent streptococcic infection of the face and neck, and although scrupulous pains were taken to prevent infection, the patient on whom I made a simple interval appendectomy died in forty-eight hours of acute diffuse septic peritonitis, and streptococci in large numbers were found in the peritoneal fluid.

As to the pus cases, the results which are now being secured in cases of diffuse septic peritonitis have rendered it much less formidable and have done much to bring more nearly together the mortality of circumscribed and spreading peritoneal infections which are the result of appendicitis. I have had more deaths from localized appendicular abscesses operated on during the past few years than from the series of cases of diffuse peritonitis. This of course may be partially explained by the much greater number of cases belonging to the first type which are encountered at operation and yet it is a striking illustration of recent surgical progress, for it is only six or seven years since practically all our patients with diffuse septic peritonitis died.

I am unable to estimate as yet the respective death rates for cases of circumscribed and widespread peritoneal infections, but am positive that the difference is very much less pronounced than formerly. Excluding those cases which are moribund and those in which definite contraindications to any operation exist, the treatment of acute appendicitis is preoperative and operative.

### PREOPERATIVE TREATMENT.

As soon as the diagnosis of appendicitis is made, the head of the bed should be elevated at least twenty inches and the patient turned sharply on the right side. In the event of unavoidable delay in getting the patient into the hands of a man competent to make the operation, this posture will greatly assist in localizing and confining escaping infection to the region of the appendix. An ice bag should be applied to the right lower abdomen and all feeding immediately discontinued. An enema may be given if desired, but I am strongly opposed to the administration of a cathartic in any case of acute appendicitis prior to operation. I have seen many cases in which much harm has been done by the peristalsis thus set up, and as we can never be certain of the exact condition within the abdomen I do not consider it safe to "give a cathartic early" as is so frequently advised. What is early when we are considering appendicitis? I do not know unless it is the day before the disease began.

Then there is the question of morphin. Under no circumstances should a patient be given morphin at this stage. The price he may have to pay for his indulgence is too great and need not be longer dwelt on. If in any particular case operation is not to be considered, morphin might be administered, but never until the diagnosis has been established.

Whenever possible all patients should be removed at once to the hospital.

No operation should be made for appendicitis at the home of the patient when it is possible, without loss of too much time, to place him in a well-regulated hospital. As a rule it is safe to state that a patient who is not too ill for operation is not too ill to be moved. The elevated position of the head and trunk and the inclination of the body to the right should be maintained during the journey.

### OPERATIVE TREATMENT.

The operation should be performed as soon as the diagnosis has been made and a competent man secured to do it. I do not recommend operations on these cases by inexperienced men. The mortality rate could not be more certainly increased in any other manner. The attempt to put a time limit on appendicitis and to decide to operate on this case because it is only "twenty-four hours old," and to postpone operation in that one because it "is the fourth day and a dangerous time to operate" has been overdone. I have seen several cases of appendicitis in which the first symptom noticed by the patient doubtless made its appearance at the time of perforation of the appendix, yet these cases were in much less promising condition for operation at the end of the first twelve hours than many other cases would be on the third, fourth or fifth day.

The only cases in which operation should be deferred

are those in which the patient is plainly dying from sepsis and those cases of diffuse septic peritonitis so far advanced that the shock of the anesthetic and even a brief operation will prove fatal. These patients, and fortunately they are few compared to the total number seen, should be treated after the plan advocated by Ochsner and described under preoperative treatment, following which, should improvement occur, they may be operated on several days later.

All cases of diffuse peritonitis, which is still spreading, should be operated on at once. The fact that the infection is not confined to the region of the appendix is not sufficient excuse for delay in these cases, as rapid removal of the offending organ with thorough cleansing of the soiled peritoneal area, followed by proper posture and free drainage, will permit a more rapid and a smoother convalescence than can be secured for those patients who have a mass of firm adhesions about the cecum, which limit necessarily the first attempt at operative relief to incision and drainage, followed by a more or less extended period of suppuration, attended by the ever present dangers of extension of the septic process and intestinal obstruction.

Cases of localized abscess should be operated on immediately. The practice of waiting for the adhesions to become more firmly established is condemned. While waiting for the adhesions to become stronger the pus may break through into the general peritoneal cavity, necrosis of the pus bathed loops of intestine is invited, and if these accidents do not occur and the adhesions do become very dense and firm, the prospect of making the operation a radical one, with removal of the appendix, is diminished and the likelihood of postoperative obstruction is increased. If the adhesions are sufficiently established to warrant the diagnosis of a localized abscess they are sufficiently established to permit that abscess to be as properly managed at the immediate operation as at one deferred for one day or a week.

Attention is again directed to the fact that early operation on a clean case removes at once the source of the disease and prevents the many distressing and often fatal complications and sequelæ, among which may be mentioned incomplete operations, protracted convalescence, hernia, sepsis, peritonitis, pylephlebitis, abscess of the liver and postoperative obstruction. These and many more are penalties still too frequently imposed on the patient by some one's procrastination, and the pity of it all is that they could and should have been avoided in nearly every instance.

### OPERATION.

In clean cases, either acute or chronic, the incision is made through the sheath of the right rectus muscle. The incision provides free access to the appendix, may be easily extended at will with a minimum of trauma, and is much preferable to the so-called McBurney or muscle-splitting incision.

The meso-appendix is ligated with catgut and a circular ligature of silk is thrown about the base of the appendix flush with the cecum. A pair of hemostatic forceps is placed distal to this ligature and the appendix cut away between ligature and forceps. The stump is wiped perfectly dry and its mucosa thoroughly swabbed with 95 per cent. carbolic. The stump is then covered by drawing over it the base of the meso-appendix or a fold of the cecum and retaining them in position with catgut sutures. The stump is never inverted into the cecum, as it does not seem to me to be advisable to invite infection of a raw surface by deliberately placing it in the foulest repository within reach, despite the fact that the various methods of preliminary treatment of that stump are said to have removed its absorbing power. I have had no trouble with subsequent infection of the silk ligature and the persistence of a sinus after operation.

The wound in the abdominal wall is closed with a continuous suture of No. 2 ten-day chromicized catgut, including first the peritoneum and posterior sheath of the rectus, and then carried back through the anterior sheath of that muscle and tied. The skin is closed with horse hair.

### INFECTED CASES.

From the standpoint of operative treatment we may consider three varieties of cases in which the infection has escaped from the appendix with or without perforation of that organ: 1, A more or less localized peritoneal infection in which the general peritoneal cavity is not protected by limiting adhesions; 2, An infection sharply localized and circumscribed, the general cavity of the peritoneum being protected by a wall of adhesions; 3, A diffuse widespread infection of the entire peritoneal cavity.

1. Abscesses Not Sharply Localized: The existence of the first variety may or may not be suspected prior to operation. It is frequently encountered in cases which we hope will prove clean. In such cases the incision should be extended well down toward the pubes, as the following steps of the operation, which should be rapidly performed, are much facilitated thereby.

The appendix is ligated and removed and the stump disinfected and buried as already described. The portion of the peritoneal cavity involved in the septic process is then rapidly, but very gently, mopped dry with gauze packs wrung out of hot sterile water, not forgetting the cul-de-sac, which in these cases will always be found to contain a large quantity of fluid varying in character from serum to sero-pus.

In females the cul-de-sac is then rapidly opened and a large split rubber drainage tube, one-half to one inch in diameter, introduced into the vagina. The abdominal wound is closed with interrupted silkworm gut sutures. The patient is placed in bed, the head of which has been elevated at least twenty-four inches from the floor. The drainage is removed in from six to ten days, depending on the course of the case. The age of the patient need not be considered in establishing this form of drainage. I have employed it in several cases of this kind occurring in girls under five years of age.

In males a large split rubber drainage tube, five-eighths to one inch in diameter and carrying a strip of iodoform gauze which must fit quite loosely, is introduced at the lower angle of the wound to the bottom of the rectovesical pouch. Alongside this a smaller tube one-fourth inch in diameter is placed likewise leading to the bottom of the cavity. These tubes are anchored to the skin with silkworm sutures. Through the plain tube the fluid which tends to accumulate at the bottom of the cavity is aspirated every two hours until the quantity secured at two or three consecutive dressings is insignificant when aspiration is discontinued. The employment of this second tube in the manner just described greatly lessens the demand on the capillary drain of tube and gauze.

The patient is placed in bed in the elevated posture above described. If at the operation it is ascertained that the infection is practically confined to the peritoneum of the right lower abdomen and pelvis the pa-

tient is turned on his right side and kept in this position for at least twenty-four hours. In the class of cases at present under discussion, namely, those of more or less limited infection of the peritoneal area surrounding the appendix and sometimes accompanied by adhesions which are too limited to protect the general peritoneal cavity from infection, no drainage of any sort other than that described above is ever employed. There is no reason for placing a drain in the space formerly occupied by a perforated appendix which has already communicated its infection to an area greater than such a drain can relieve. The source of the infection having been removed, the region of the cecum requires no particular and special drainage. The peritoneum from this point to the bottom of the pelvis has become involved, and, if by placing the patient in the elevated posture we secure the gravitation of fluids to the lower peritoneal pouch, that is the point to drain. Multiple drains mean multiple adhesions and greatly increase the tendency to postoperative obstruction. The introduction of strips of iodoform or plain sterile gauze for quarantine purposes may be necessary in a few cases of this type in which for some reason it has been impossible to dispose satisfactorily of the stump, or when the tissue in the immediate vicinity of the appendix makes one suspicious of approaching necrosis or gangrene. Gauze is a most useful agent when employed for the purpose of isolating septic areas, but most useless when called on to act as a drain, and should never be depended on alone for the latter purpose. Since abolishing the use of gauze in these cases, with the above exceptions, and draining them in the manner just described I have noticed that convalescence is much more rapid and smooth and the danger of troublesome complications has been materially lessened.

2. Abscesses Sharply Localized: In these cases where the septic process is sharply circumscribed and shut off from the general peritoneal cavity by a wall of limiting adhesions the safe evacuation of the products of infection and the successful guidance of the patient to complete and permanent recovery present many and varied problems, among the most important of which are:

*a*. Shall we incise over the most prominent portion of the abscess and establish drainage without opening the general peritoneal cavity, or, as recommended by Murphy, shall we always open into the cavity to the inner side of the pus collection, coffer-dam the field of operation and then establish drainage?

*b*. Shall we remove the appendix or not?

*c*. How may we best prevent contamination of the general peritoneum?

*d*. What form of drainage shall we employ?

*e*. How shall we prevent hernia?

*f*. Shall we in every instance make a second operation for the removal of the appendix where it was considered improper to attempt its removal at the first?

In reply to question *a* I must say that I think neither procedure should invariably be followed. The plan of attack must be adapted to the particular case in question.

Roughly speaking, we may divide these cases into two classes. First, those in which the abscess is situated external to the cecum. Second, those in which it is located on the inner side of the cecum. It has been my practice in all cases belonging to the first variety to incise directly over the most prominent portion of the tumor, using every precaution not to expose the peritoneal cavity. In nearly every case this may be accomplished and the pus safely evacuated without extravasation. Sudden cessation of the outward flow of pus during such an operation should be considered as indicating the possible rupture of the abscess at another point into the general peritoneal cavity. Should such an accident have occurred it is imperative that it be recognized and properly dealt with immediately. I have had four or five such cases. When the abscess is situated on the inner side of the cecum in practically every instance I open the peritoneal cavity to the left of the tumor first. The field of operation is then completely encircled with strips of plain sterile gauze. Each strip consists of four thicknesses of gauze three inches wide, with the free edges sewn fast. These strips extend from the bottom of the cavity well out on the anterior abdominal wall and when in place remind one of the old fashioned well with its brick or plank sides. Through this wall of gauze the pus may always be conducted safely to the surface. The best way to accomplish this is to make the opening into the abscess so small at first that the pus may be taken up by cut gauze sponges as rapidly as it escapes. When the pus cavity is practically empty the opening may be enlarged as necessary. The gauze strips are left in position to be removed with the drainage from the fifth to the tenth day, depending on circumstances. Coming to question *b*, concerning the removal of the appendix, I consider that no invariable rule should be established. As my experience has increased I have more and more frequently removed the appendix at the first operation. Many cases are encountered each year, however, in which it is considered inadvisable to attempt to remove the appendix at this time. This is a question which must be decided by individual operators in any given case entirely from their own experience.

The third question has been answered already in describing the evacuation of the abscess. As to the question of drainage, all drains employed in such abscess cavities should be of soft rubber, of good size and with walls sufficiently thick to prevent the collapse of the tube and obliteration of the drain. Glass tubes are not recommended because of their rigidity, which in some of my earlier cases was responsible for the appearance of fecal fistulæ. Gauze of any sort is much more frequently a cork than a drain and is never employed for this purpose. The split tube is introduced to the bottom of the cavity and brought out through the center of the well of gauze. It is removed at any time after the fifth day that the conditions of the particular case permit.

Questions *e* and *f* may be considered together. As the opening left for drainage in these cases is invariably a large one, it has been my observation that if the patient is permitted to go home after his wound is closed by granulation in the majority of instances he will develop a hernia. Acting on this observation, I tell all my patients who have been thus freely drained that they must have a second operation, that the operation could not be safely completed at the first sitting, and that they can not leave the hospital until the second operation is performed. I have never had a patient refuse to follow my wishes in this matter. At this operation, which consists in reopening the wound and freshening its edges, the appendix is removed if its removal was not accomplished at the first one. I would rather remove the appendix and repair the hernia on my cases than have them go to someone else for relief at some later day.

The removal of the appendix at some of these second operations is extremely difficult, but I consider it a wise procedure, as fully 20 per cent. of such cases would relapse. The organ is not destroyed by the suppurative process nearly so frequently as has been claimed.

3. Diffuse Septic Peritonitis: By this term is to be understood an inflammation involving, so far as we can tell, the entire peritoneum. I merely mention the steps of the procedure which is recommended.

*a.* Incision from umbilicus to pubis in median line.

*b.* Removal of appendix.

*c.* Thorough irrigation of entire peritoneal cavity with hot saline solution or hot sterile water.

*d.* Introduction of a large split rubber tube for drainage. In females from the cul-de-sac into vagina; in males from rectovesical pouch out through lower angle of abdominal wound and carrying a wick of iodoform gauze. In the latter a second smaller tube, without the gauze wick, is placed alongside the first, through which fluid collecting at bottom of pelvis may be aspirated.

*e.* In females the abdominal wound is completely closed with interrupted sutures of silkworm gut. In males the wound is closed with the same material down to the tubes.

*f.* Patient is placed in bed, the head of which has been elevated from twenty-four to thirty inches from the floor.

Operations made on patients in this condition should be rapidly performed, as they will not bear much manipulation or prolonged surgical interference.

This is the only condition in which an irrigating stream should be directed into the abdominal cavity. Its use in localized abscesses or limited peritoneal infections is most vigorously condemned.

SUMMARY.

The best results in appendicitis follow early operations.

In clean cases, acute or chronic, the operative mortality is practically nil.

The hour or day classification of appendicitis should be discarded and a pathologic classification substituted.

In spreading peritonitis immediate operation is urgently indicated.

In patients already moribund, or in those for whom the added shock of operation would determine a fatal result, operation should be delayed.

The elevated posture of the head and trunk and the resulting accumulation of septic fluids in the lowest peritoneal pouch, from which they are rapidly drained by large sized tubes, have robbed appendicitis of many of its terrors.

---

## SOME OF THE USES OF IODIN IN SURGICAL PRACTICE.

JOHN EGERTON CANNADAY, M.D.
Surgeon in Charge, Sheltering Arms Hospital.
PAINT CREEK, W. VA.

At the present day I think I may truthfully state that the most decided tendency in the use of drugs is clearly a return to the simple life. The profession is at least partially freed from the bondage of an empirical authority, and one by one is dropping the complex and respectable myths and legends of medicine.

Inasmuch as it has been clearly shown by careful and painstaking laboratory workers that a 1-200 solution of iodin will kill the staphylococcus pyogenes in five minutes, that two minutes' exposure of the streptococcus (most virulent of pathogenic germs) to a 1-500 solution of iodin will destroy its life, that it requires thirty minutes' exposure to a 1-1,000 solution of bichlorid of mercury, the hitherto acknowledged chief of antiseptics, to accomplish the same results and that while iodin is much less toxic it is a far more powerful antiseptic than either carbolic acid or bichlorid of mercury, I have made use of this agent in much of my surgical work.

In cold abscesses in individuals of lowered resistance I have found injections of iodoform emulsion or iodin solution to be of great value. These patients are often unable to bear any more radical treatment than aspiration or injection. The iodoform may be used suspended in olive oil or glycerin or in an ethereal solution. The oil or glycerin should be sterilized by boiling and the iodoform by four days' submersion in 1-1,000 solution of bichlorid of mercury. The ethereal solution produces pain, and as it is more rapidly absorbed may produce symptoms of poisoning. Ten per cent. is usually the most desirable strength, and the amount left behind should usually vary from one dram to one ounce.

Rather recently I treated a patient by this method who had several tuberculous abscesses in the muscles of the back and chest in addition to a number of signs of lung involvement. I emptied these tubercular collections through small incisions under a careful aseptic technic, injected a 10 per cent. iodoform emulsion, closed the openings by suture and sealed them with a few fibers of cotton and flexible collodion. These sealed packages of emulsion were left alone for two or three weeks and the iodoformization was then repeated. This treatment in conjunction with appropriate dietetic and hygienic measures produced great improvement; the cough, fever and night sweats disappeared; there was a marked gain in weight and in three months the patient was apparently well.

In the treatment of sepsis from puerperal infection, also in the treatment of sapremia due to the putrefaction of retained secundines, I thoroughly curette and irrigate the uterus, then pack the uterine cavity with 10 per cent. iodoform gauze. This is removed on the third day, and if the symptoms have not subsided the uterus is daily irrigated with a 1-1,000 solution of iodin in sterile water. By this treatment we promote the absorption of a powerful yet comparatively harmless antiseptic. Occasionally I have applied the tincture of iodin to the lips and the interior of the uterine cervix for purposes of partial sterilization prior to curettage, and not infrequently I make a local application of the same drug to the entire uterine cavity after curettage in cases of chronic endometritis.

Iodin in solution in mild strength, 1-1,000, is of great value as an irrigation in the treatment of suppurative arthritis, large abscess cavity, empyema, etc. I have often used a 1 per cent. solution of iodin in the treatment of suppurating wounds and sinuses, resulting in the quick disappearance of pus and the formation of healthy granulation tissue. After operations about the genitalia and other parts where it is difficult to keep a dressing clean, I generally dispense with any of the ordinary dressings and use instead a protective ointment composed of sterile iodoform and petrolatum. By this means primary union is usually secured.

In the treatment of boils, abscesses and carbuncles I incise, evacuate the contents, wipe out carefully, curette away pyogenic and necrotic tissue and then apply thoroughly to the walls the plain official tincture of iodin. If the cavity is small, the tincture, instead of being applied with a swab, is poured into the cavity and brought in contact with its walls by gentle manipulation. This treatment is usually followed by the prompt disappearance of pus and rapid healing by granulation.

I have found the tincture of iodin to be a simple, readily obtainable and effective agent for the preparation of a small patch of skin preliminary to the insertion of the needle of the hypodermic or of the antitoxin syringe. For a year past I have been using a 0.5 of 1 per cent. iodin solution for purposes of hand disinfection in all cases in which rubber gloves were not worn. As a routine practice I wear gloves in operative work. In a certain class of cases gloves are undesirable. Again, a glove may be punctured or torn in a septic case, and the surgeon will feel the need of a reliable antiseptic, both for the protection of himself and his future patients. The use of this solution is simple and time-saving. The technic I practice is as follows: Thorough scrubbing with nail brush, green soap and running hot water. Cleanse the hands in a systematic manner. Take each part in a certain order every time, so as not to skip any part. Pay particular attention to the nail folds, subungal spaces and the skin between the fingers. Clean under short-clipped nails with a heavy metal nail file. Scrub again, wash off soap in running hot water, remove residue of soap by immersion in 70 per cent. alcohol. Immerse in iodin solution for five minutes, rinse in sterile water or let the solution dry on the hands. The light brown stain can be removed by washing in dilute ammonia water after the operation is over, or if left alone will soon disappear.

In the preparation of the site of incision I invariably observe the following routine: The evening prior to operation the area is covered by a green soap poultice, which is allowed to remain for several hours to loosen the dead and scaling epithelium; the part is shaved, going wide of any possible incision, then carefully cleansed by the use of a soft nail brush or gauze pad, liquid antiseptic soap and sterile water followed by alcohol. After this a compress wet with 1-5,000 bichlorid is applied, covered with oiled silk or other protective and secured by a bandage. This is undisturbed until the next day after the patient is under the anesthetic, when the compress is removed and the part is treated to a second cleansing with antiseptic soap, gauze pad and sterile water, followed by dilute alcohol; the solution of iodin is then applied and allowed to dry on the skin. Naturally in emergency cases much of the treatment preliminary to the use of the iodin solution will have to be omitted.

The solution of iodin used for the hands may be made up with dilute alcohol or prepared according to the following formula: Iodin 2.5 gm., potassium or sodium iodid 5.5 gm., water 250 c.c. This gives a 1-100 solution, which can readily be diluted to the desired strength. In a long series of cases in which the iodin solution has been used as described, the results from a clinical point of view have been excellent, and it is easy to conclude that as a chemical agent for at least the partial sterilization of the skin iodin is the most satisfactory substance we possess.

It must not be forgotten that this, the most harmless of antiseptics, and its compound iodoform are active agents, and as such should be used carefully. Under certain conditions they are very toxic. The pyogenic membrane lining an abscess cavity seems to be practically immune. Patients suffering from septic infection will tolerate more than the usual amounts administered. The feeble and aged are often susceptible. Iodoform irritation on the exterior of the body usually takes the shape of a severe dermatitis, not any worse, however, in character than that occasionally produced by the use of a bichlorid compress on a sensitive skin.

My conclusions are that iodin is the antiseptic *par excellence* for the skin of the hands and operation site. The solution of iodin is easily prepared and is stable. It does not coagulate albumin or form inert compounds with the tissues. It is of more value in many ways than either carbolic acid or bichlorid of mercury and not nearly so poisonous.

---

## THE PRACTITIONER'S PART IN THE MOVEMENT AGAINST TUBERCULOSIS.*

J. C. WILSON, M.D.
PHILADELPHIA.

This remarkable exhibition and the popular interest it has aroused, which grows wonderfully as it is removed from one city to another, marks an epoch of transcendent importance in preventive medicine.

The great pests—the oriental plague, typhus, leprosy, smallpox, typhoid fever, tuberculosis—have been the scourges of mankind through successive historical epochs because of ignorance. Enlightened modes of living and knowledge of the ways by which they spread and by which they can be prevented have restricted the prevalence of these diseases in civilized communities and greatly robbed them of their terrors. Two of them only remain to-day as world pests—typhoid fever, which could not exist in a community such as Philadelphia but for the cupidity of the spoilsman, and tuberculosis, the very existence of which as a modern plague is threatened by the spreading influence of this exhibition and the great societies under whose auspices it is held.

### THE MOVEMENT AGAINST TUBERCULOSIS.

In this building, on its walls and in the cases, are displayed, on a scale never before undertaken and with a precision and definiteness never before possible, facts in regard to tuberculosis which to a stricken people are glad tidings of great joy, and the facts are for the people. The exhibition is free and it is popular. Earnest and trained men, having knowledge, are here to make the subject plain and are striving faithfully and patiently to enlighten the dullest eager intellect as to the simple means of prevention and the reasonable hope of cure.

With reference to cure it is possible to be overenthusiastic. I fear that we are sometimes betrayed by our earnestness into that error. As physicians we must cultivate in this matter the judicial temperament. In individual cases we must shun the cruelty of holding out false hope. But as regards prevention there is no limit to the promise that can be fulfilled. It is only needed that the facts be known and used. Here we can not be too strenuous. Fired with a genuine enthusiasm, we can rouse the people to do the things needful, for the whole matter touches them and in sorrow they know it. Animated with a confident hope based on knowledge, we can hold out a promise of relief, the fulfillment of which is in their hands, for as the people live shall they suffer or be free. I am not of that sanguine temperament which permits me to look forward to the stamping out of consumption and the other tuberculous diseases in a decade or two or even in a generation; still I firmly believe—a belief that finds support in the history of the rise and decline of the other pests which I have named—that this great plague of our civilization can not continue to prevail as it has, but that in a future so near

* One of the addresses to physicians read at the Free Exhibition on Tuberculosis at Philadelphia.

that it will be seen by some who are here to-night this foul disease as it now prevails will also become chiefly of historical interest in our western civilization even as leprosy, the bubo plague and typhus are—a wolf baying at us and hanging on our flanks, but easily repelled and giving us no real trouble so long as we are on guard.

The three great signs of the times are (a) the diffusion of knowledge, (b) the rousing of the people, (c) organization.

*a.* The knowledge is simple enough. The bacillus found by Robert Koch in 1881 and its modes of existence and conveyance constitute the gist of it; but such is the inertia of ignorance that a quarter of a century passed before it became the possession of the people as a motive.

*b.* The rousing of the people from an apathy more than oriental is full of promise. Consumption is their affair. In ignorance they bore the evils of it and were helpless; in knowledge they will destroy it. In the way of action there were two great stumbling blocks—the doctrine of heredity, of which, in the old and paralyzing sense, science has made an end, and the conception of a pretuberculous state, which never recommended itself to sober, pathologic judgment and has now wholly ceased to darken counsel in regard to a comparatively simple infectious process. We now know beyond doubt that the symptoms once thought to indicate the pretuberculous stage are the clinical phenomena of tuberculous infection.

*c.* Organization has been of slow growth, but has gained momentum with the years. Its beginnings were in the private sanitarium. Then, in response to facts not to be gainsaid, came the public sanitarium. If the rich could be helped and cured, why not the poor? Then followed the association of the sanitarium with the laboratory. If patients got well, why not use them for statistical purposes; their sputa and blood for research; laboratory animals for elucidation and control; different localities and environment for comparison and the study of the part played by altitude, temperature, humidity, soil and all the factors which enter into the complex subject of climate for the part which they play in the prevention and cure of this fell pest? It followed that the influence of sociologic conditions, the home, the school, the workshop, the factory, food, habits, clothing, marriage, the rearing and care of families, should be carefully studied from the scientific standpoint as etiologic factors, and that the duty of the state and municipality to the people in the management of the disease in its early and curable stages and its developed and transmissible periods should be more and more carefully investigated. There have been devoted and unselfish men in our profession ready on all sides and in every country for this great work; and, imbued with the scientific spirit and altruism of medicine, these men have been eager to avail themselves of every opportunity to meet and discuss the subjects so near to their hearts. Hence local and national societies and international congresses. Need I say to you that the two societies under the auspices of which this exhibition is held, the National Association for the Study and Prevention of Tuberculosis and the Pennsylvania Society for the Prevention of Tuberculosis, occupy, in the scope and results of their work, the foremost place in the orderly progress of this great scheme of organization?

You have carefully studied this exhibition. You have noted its wide scope. All of us have been deeply impressed with its lessons not only to the people for whose enlightenment it was arranged, but also for the members of our profession. It is an object-lesson of the highest significance. Here you have seen in convincing array the results of the labors of the specialist, the pathologist, the bacteriologist, the phthisiologist, the sanitarian, both general and special, the health officer, the climatologist, the diagnostician, in the broad and in the narrow sense, and the tentmaker. It is true that the pharmacologist and the manufacturing druggist are not to any great extent in evidence. Like the ancients with their elements of fire, air, earth and water, we seem to have reduced our principles of treatment to fresh air, sunshine, abundant food and rest—four elements of irreproachable character. If we were to venture to add to this most respectable list, the additional measure would, it seems to me, by common consent, be household and personal cleanliness.

But I find in this great exhibition something lacking. The reason this something is not here is, I believe twofold: First, that it is little understood and, therefore, sadly overlooked, and, second, that such things as are known of it are difficult to depict and not well fitted for popular demonstration, scarcely adapted, in fact, in the present state of knowledge, for very positive assertions from the professional point of view. That "something" is the recognition and diagnosis of the very beginnings of tuberculosis in the human being.

### THE PRACTITIONER'S PART.

This statement brings me back to the theme of my discourse—"The Practitioner's Part in the Movement Against Tuberculosis."

In the matter of the individual case, this is the one thing needful. The work of all the specialists whom I have named has to do with the cases that are known to be tuberculous, that almost any tyro can recognize. It is only the practitioner, the family physician, the *haus arzt*, who sees the cases in their very beginning—and often, alas! too often, not even he. For some twelve or fifteen years I have been the local examiner for patients applying for admission to the Adirondack Sanitarium, and in all that time I have only once had referred to me a truly incipient case of phthisis even under the very conservative requirements of the national association, promulgated last year. These are:

"Slight initial lesion in the form of infiltration limited to the apex or small part of one lobe.

"No tuberculous complications. Slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight).

"Slight or no elevation of temperature or acceleration of pulse at any time during twenty-four hours, especially after rest.

"Expectoration usually small in amount or absent.

"Tubercle bacilli may be present or absent."

If we consider three facts in regard to tuberculosis, especially tuberculosis of the lungs, we are overwhelmed with the importance of the practitioner's part in the great movement which is now occupying the attention of the world. These facts are: First, that tuberculosis at the beginning is a local infection; second, that at this stage it is not transmissible; third, that at this period it is curable.

*1. Pulmonary Tuberculosis a Local Infection.*—We are not here to discuss all forms and phases of a subject on which volumes have been written. The teachings of pathology are quite clear. A man may be tuberculous and not consumptive. In fact, every sufferer from consumption, in the ordinary sense, is at first and for an

indefinite period merely tuberculous and not yet consumptive. The local tuberculous lesion may elude physical examination and cast no shadow in the *x*-rays. As it develops and extends and new lesions develop, toxins are produced and the toxemia causes symptoms, rapid pulse, slight rise of temperature, accelerated respiration, loss of appetite and weight and nervous erethism. If the lesion is peripheral there is pleural irritation and unproductive cough; if it causes bronchial irritation there is hacking cough, with a slight morning expectoration. As it extends, cough becomes more marked and constant. Tubercle bacilli are scarcely present in the beginning, while the lesion remains closed. They are the outcome of a necrotic process; the lesion breaks and becomes open. In any case negative results are inconclusive. Repeated examinations must be made. Their absence even then does not justify a negative diagnosis. This is a stumbling block to many practitioners. As the lesion extends, physical signs appear; at first uncertain and elusive, later more distinct and significant. They are deficient expansion, slight relative dullness with heightened pitch, enfeebled respiratory murmur with the bronchial character misnamed harsh and increased vocal fremitus; but all so little marked as to require careful, even repeated systematic examination for their detection. A history of pleurisy, especially of pleural effusion, is very significant.

*2. Tuberculosis of the Lungs Not Transmissible in the Early Stages.*—So long as the lesion has not undergone necrosis, except in extremely rare cases of tuberculous bronchitis, tubercle bacilli are not present in the sputum, and the patient is not as yet a menace to the health of those surrounding him. If the disease is arrested at this point, the lesion becomes obsolescent and the patient recovers without being aware that he has been tuberculous and without having played the part of a distributing center for the disease.

*3. Curability of Phthisis in the Stage of Incipiency.* The frequency of obsolescent tuberculous lesions found on the postmortem table in the bodies of those who have died of other diseases, variously estimated at from 30 to 70 per cent., affords incontrovertible evidence of the curability of phthisis at this period. It is impressive to reflect that probably in all cases such cures are spontaneous, the lesions usually being too circumscribed to have given rise to recognizable physical signs. Dr. Norris concludes a recent paper on the "Diagnosis of Incipient Pulmonary Consumption" with the following statement: "High as the mortality from tuberculosis is, a greater number of individuals recover from the disease without knowing they ever had it than die of it."

How many others who traverse the thorny path of progressive tuberculosis to its ghastly end might be saved from such a fate by early diagnosis and treatment can never be known until the practitioner recognizes his part in the great anti-tuberculosis movement and, discarding with the misleading phrases, "slight bronchitis," "spot on the lung" and "pulmonary catarrh," all false sentiment and fear, does his duty with the courage, promptitude and skill of the American physician.

1509 Walnut Street.

**Training of Children.**—S. Merrill, Concord, N. H., says that it is important that children should be trained with a view to fitting them mentally as well as physically for the wear and tear of the life which they will have to encounter.

## *Special Article*

# THE PHARMACOPEIA AND THE PHYSICIAN.

## CHAPTER XVI.

### CIRCULATORY STIMULANTS (CONTINUED.)

#### STRYCHNIN.

Strychnin, unlike digitalis, has no perceptible direct action on the heart, but produces its circulatory effects wholly by its influence on the centers, except in so far as the local action on the alimentary canal is concerned; this may be disregarded in the present consideration of strychnin, which is commonly injected hypodermically when its circulatory effects are desired.

Therapeutic doses of strychnin cause a rise of blood pressure by stimulation of the vasomotor center; the reflexes are increased, leading to improved tone of the voluntary muscles, and increased muscular activity always tends to increase the heart rate; this tendency, however, is counteracted by the stimulation of the vagus center by strychnin, the heart being slowed or showing little change in frequency. If the slowing is excessive there will be a fall of blood pressure despite the vasoconstriction, but this does not usually occur. If the tendency to increased frequency predominates over the vagus stimulation the rise of blood pressure is further augmented.

As strychnin operates readily to produce its effects it is a most valuable remedy when a quick rise of blood pressure is required. So rapidly are its effects elicited that convulsions may occur in a frog within two minutes of the injection of a toxic dose, and after massive doses rabbits may give a single convulsive leap into the air and be apparently lifeless from paralysis of the respiratory center when they strike the operating table.

Biberfeld has investigated its mode of action on the respiratory center. He depressed the respiration by morphin, after which strychnin was injected; this usually resulted in a greater increase in volume (sometimes even exceeding that before the administration of morphin) than in frequency.

It has been suggested that morphin depressed the reflex excitability, while strychnin tends to make all reflex efforts maximum.

Biberfeld agrees with previous investigators that strychnin does not cause increased irritability of the center for sensory impulses coming from the lungs, but considers the chemic stimulation of the blood the essential factor.[1]

The following preparations are official:

STRYCHNINA.—U. S.—This is an alkaloid obtained from nux vomica; it is also obtainable from other plants of the *Loganiaceæ*.

Strychnin is only slightly soluble in water 1/6400, but is soluble in 110 parts of alcohol.

STRYCHNINÆ SULPHAS.—U. S.—This is the salt of strychnin that is most extensively used in this country; it contains five molecules of water and approximately 78 per cent. of strychnin alkaloid. Strychnin sulphate is soluble in 31 parts of water and in 65 parts of alcohol.

1. Owing to the frequency with which poisoning by strychnin occurs, its toxicology deserves brief mention here.

As is well known, strychnin causes a characteristic type of convulsion rather closely resembling tetanus. The amount of the alkaloid that is necessary to produce this toxic effect is much greater, however, than is usually supposed; but, on the other hand, when once a large amount has actually entered the circulation, there is little hope of ultimate recovery. As death is due to paralysis of the respiratory center life may be prolonged, and a possible recovery brought about, by carrying on artificial respiration. This, however, should be begun before natural respiration ceases or even before it becomes very greatly depressed.

Strychnin requires several days (3 to 8) for its total elimination. Diuretics hasten elimination and may be of benefit when the amount of the poison that has been taken does not greatly exceed the minimum fatal dose.

Cushny advises strong tea (infusion) when the patient is seen with the strychnin in the stomach. This advice seems to be based on a misconception of the capacity of tea tannin for forming the insoluble tannate.

The fact that strychnin acts directly by paralyzing the respiratory center fully explains the possible danger that may result from the use of a stomach tube, and it will not be necessary to repeat this frequent caution.

On the continent of Europe the preference is usually accorded to the nitrate. This is official in our Pharmacopeia as:

STRYCHNINÆ NITRAS.—U. S.—This represents 84 per cent. of strychnin alkaloid and is soluble in 42 parts of water or in 120 parts of alcohol.

The average dose of either of the official preparations is given as 0.001 gm. (1 mg. 1/64 gr.).

Strychnin is useful in all forms of low blood pressure because of its action on the vasomotor center.

There can be little doubt of the beneficial effects of strychnin in many cases of shock or collapse, but when irrecoverable shock exists it appears to depress further the centers after an extremely brief stimulation.[2]

To secure its greatest usefulness in conditions of this kind strychnin should be given hypodermically, or to secure an even quicker action it should be injected deeply into the muscle of the arm or thigh. This method of hypodermic injection is usually to be preferred as it is less painful than injections just beneath the skin.

Strychnin is one of the best of respiratory stimulants and in an emergency large doses may be given. It is always to be remembered that strychnin is a remedy for the crisis and is not to be used as is digitalis, to maintain blood pressure for a considerable length of time.

When paralysis of the limbs is due to a lesion in the cord which completely blocks the transmission of nerve impulses strychnin can do no good, since it has no peripheral action, but if the paralysis results from a lesion in the brain the increased reflexes which strychnin causes will serve to delay muscular atrophy. It also may serve to restore the tone of the reflexes when these are lowered by functional disturbances of the cord. Thus incontinence of feces and urine may be relieved when these are due to the lowered reflex centers for the sphincters of the bladder and anus.

Caffein, which has been mentioned several times in this series of articles, is closely related to strychnin, to which, however, it is greatly inferior, so far as any influence on the circulation is concerned. It stimulates the vasomotor and respiratory centers and is useful, therefore, in the treatment of poisoning by morphin and other narcotics, in the form of strong tea, but strychnin serves the same purpose and more efficiently.

Hoffmann noticed that theobromin possessed a stimulant action on the myocardium, similar to that shown by caffein, but no vasoconstrictor effect. In therapeutic doses of either agent, however, this cardiac effect is of little importance.

### ATROPIN.

Atropin causes acceleration of the heart by paralyzing the vagus endings, and this also causes an increased systole and a lessened diastole. The rate of the heart may be twice as great as under normal conditions, the result being a considerable increase in the output of the heart in a unit of time.

The effect on the circulation of the increased heart action is supplemented by the constriction of the arterioles of the splanchnic area, due to stimulation of the vasoconstrictor center by atropin, which also stimulates the vasodilator center for the vessels of the skin, particularly those of the face and neck, but this is of comparatively little influence on the general blood pressure which rises in response to the two actions just mentioned.

The influence of atropin on the heart rate is much less in children and in old age than it is between the ages of 20 and 60 years, because the vagus inhibition is slight at the extremes of life in man. The vagus is much more active in some animals than in others. In this respect the dog resembles man.

Atropin may cause a brief but unimportant slowing of the heart, due to stimulation of the center, preceding the acceleration which depends on the paralysis of the vagus endings. While it has been undeniably shown that atropin may powerfully stimulate the myocardium, this effect with theraputic doses is so slight that it may be entirely disregarded. Atropin acts as a stimulant to the respiratory center, but it is inferior in this respect to strychnin; it increases the rate, and probably the depth, of the respiration.

The central action of atropin is exerted mainly on the motor area, but it has been suggested that the differences between the action of atropin, caffein and strychnin on the various parts of the central nervous system are in degree rather than in kind. Thus, while caffein acts mainly on the higher centers in man, stimulating the psychic functions, it is capable of causing strychnin-like convulsions in the frog. All three act as powerful respiratory stimulants in mammals.

Atropin is official as:

ATROPINA.—U. S.—Atropin is an alkaloid prepared from *Atropa belladonna*, or from other plants of the same family. It is soluble in 450 parts of water and in less than 2 parts of alcohol.

ATROPINÆ SULPHAS.—U. S.—This salt of atropin is official in many if not all pharmacopeias and is the best known and most widely used preparation of the atropin group. It is soluble in less than one part of water and in 4 parts of alcohol.

Average dose: (Alkaloid or salt) 0.0004 gm. (0.4 mg. 1/160 gr.).

Atropin is indicated when the heart is considerably slowed. For this purpose the average dose given above is not usually sufficient, about 1 mg. (1/65 grain) being necessary to increase the rate; so large a dose being necessary to produce paralysis of the vagus endings in the heart. It must be remembered, however, that in children and in the very old (after 70) the effect to be expected is much less than that seen between the ages of 20 and 60. This larger dose causes stoppage, or, at least, a marked diminution of salivary secretion with consequent dryness of the mouth and throat.

While atropin has been used in shock and collapse, it can have but little influence on blood pressure or respiration in such cases. Atropin may be used to determine whether an abnormally slowed or intermittent heart results from central influences or from causes within the heart itself, since it cuts off all impulses from the center arriving through the vagus, but produces no appreciable effect if the cause lies within the heart.

Atropin has been used to prevent the reflex stoppage of the heart occurring at the commencement of anesthesia, but it has been shown that there is no danger of such a catastrophe if the anesthetic is not used in too great concentration.

Poisoning by certain fungi which contain muscarin, while rare, may best be treated with moderate doses of atropin. Pilocarpin is also antagonized in nearly all its actions by atropin, but the latter does not counteract the cardiac effects of physostigmin which acts on the myocardium.

The value of atropin in opium poisoning has been much disputed. It seems to possess no advantage over caffein and strychnin in such cases and it has the disadvantage of adding to the depression of the respiratory center if more than a small dose is given. Clinical experience seems to have abundantly proved that small doses of atropin are corrective for ordinary doses of morphin, and it is almost universally so used.[3]

Atropin is usually given hypodermically when the central effects are desired. The local action of atropin in the intestines has been mentioned, and we may have occasion to refer to it again.

### CAMPHOR.

CAMPHORA.—U. S.—Camphor is a white, volatile, solid substance having a crystalline structure and a characteristic aromatic odor and taste. Camphor has been used in the Far East for many centuries, but was not known in Europe until introduced by the Arabians. It is now official in all pharmacopeias.

Average dose: 0.12 gm. (2 grains).

AQUA CAMPHORÆ.—U. S.—This is a saturated solution of camphor in distilled water. It is frequently used as a vehicle for other and more active medicinal substances.

2. Crile defines surgical shock as an exhaustion of the vasomotor centers, the cardiac and respiratory centers being only secondarily involved, and collapse as due to a suspension of the functions of the cardiac or vasomotor centers or to hemorrhage. Of course, an exhausted or paralyzed structure can not be stimulated. Sollmann defines both shock and collapse as a sudden depression of the activity of the medullary center; if of reflex origin, shock; if direct, collapse. We employ the terms in the latter sense. A depressed center may be stimulated.

3. A widely used combination consists of morphin sulphate 0.015 gm. (¼ grain) and atropin sulphate 0.0004 gm. (1/160 grain) prepared in the form of the now popular hypodermic tablets or dissolved in distilled water sufficient for one dose.

Average dose: 1 c.c. (2 fluidrams).

SPIRITUS CAMPHORÆ.—U. S.—This is a 10 per cent. solution of camphor in alcohol.

Average dose: 1 c.c. (15 minims).

LINIMENTUM CAMPHORÆ.—U. S.—This preparation, variously known as camphor liniment and camphorated oil, contains 20 per cent. of camphor dissolved in cottonseed oil. While largely used as a mildly rubefacient local application it is not infrequently used for hypodermic injections or for the internal administration of camphor in the form of an emulsion. The average dose would be about half of that given under spirit of camphor.

In shock or collapse camphor is given by the stomach, producing a feeling of warmth and probably acting reflexly for the most part. The respiratory and vasomotor centers, as well as the heart muscles, are stimulated, thus causing a rise of blood pressure. The heart is usually slowed and the contraction strengthened. Camphor is almost insoluble in water and only slightly volatile at the body temperature, and its action, therefore, is very uncertain; 0.03 gm. (½ grain) may improve the pulse in some cases while twenty times as much may be required in others, hence but little reliance can be placed on it in crisis, though it is very often effective. The spirit, diluted with water, is frequently used for internal administration. A number of camphor derivatives have been employed from time to time, but they have not been shown to possess any advantages over camphor itself, or one of its more simple preparations.

Camphor is frequently employed as a diaphoretic, particularly in combination with other agents, because of its stimulation of the vasodilator centers for the cutaneous vessels.

As noted above, camphor water alone has little therapeutic value and is useful mainly as a vehicle for other substances. Camphor may be given in pill form, in capsules or in the form of an emulsion. Probably the best method of administering camphor consists in suspending the finely powdered substance in twenty parts or more of milk. For this purpose from twenty drops to one teaspoonful of the spirit of camphor may be directed to be given in one or two tablespoonsful of milk.

The several preparations of camphor are commonly employed externally as a mild rubefacient, but the action of camphor when applied in this way is largely if not entirely a local one.

### MUSK.

MOSCHUS.—U. S.—This substance has been used in Europe for several centuries, and in China and other far Eastern countries from time immemorial. The portion that is now official is described as "The secretion from the preputial follicles of *Moschus moschiferus*" (musk deer), an animal which inhabits Thibet and other parts of Central Asia.

Average dose: 0.25 gm. (4 grains).

TINCTURA MOSCHI.—U. S.—This represents 5 per cent. of musk in diluted alcohol.

Average dose: 1 c.c. (15 minims).

Musk was brought forward nearly a century ago as a powerful circulatory stimulant, and S. Solis-Cohen recently recommended it as an efficient and dependable remedy when it can be obtained of good quality, but it is extremely expensive and subject to gross adulteration.

Musk probably resembles camphor in its action on the centers and has the advantage of greater solubility in proportion to the amount required.

Castor fiber and sumbul root, which have been recommended as substitutes for musk, are entirely devoid of any such central action as that claimed for the latter.

Musk may be given in capsules, or in some cases the tincture may be preferred.

### AMMONIUM PREPARATIONS.

While ammonia, as one of the products of the decomposition of nitrogenous materials, was known from a very early period, the volatile salts of this substance were not available in Europe as medicines until after the thirteenth century, when Raymundus Lullus first produced ammonium carbonate from urine. The stimulating action of this salt, it is said, was known for many centuries to the Hindoos, and was probably known to the Arabians. It is now official as:

AMMONII CARBONAS.—U. S.—This is a white, hard, translucent solid having the characteristic odor of ammonia and a sharp saline taste. The official salt is described as being "a mixture of acid ammonium carbonate and ammonium carbamate."

Average dose: 0.25 gm. (4 grains).

AQUA AMMONIÆ.—U. S.—This is an aqueous solution of ammonia containing 10 per cent., by weight, of gaseous ammonia.

Average dose: 1 c.c. (15 minims).

SPIRITUS AMMONIÆ AROMATICUS.—U. S.—This is a hydroalcoholic solution containing 3.4 per cent. of ammonium carbonate, 9 per cent of ammonia water and 70 per cent. of alcohol aromatized with oil of lemon, oil of lavender flowers, and oil of nutmeg.

Average dose: 2 c.c. (30 minims).

The volatile salts of ammonium, in the form of the well-known "smelling salts," are very commonly employed by inhalation for their reflex effects on the respiratory and cardiac centers. The aromatic spirit of ammonia when taken by the stomach has a similar action. Other actions of ammonium salts have been enumerated in previous chapters.

The water of ammonia, when taken internally, merely acts as a caustic alkali. It is seldom so used. The aromatic spirit is usually added to water at the moment of taking.

Smelling salts consist of varying mixtures of ammonium carbonate, or of ammonium chlorid with potassium carbonate, and spirit of ammonia to which oil of lavender flowers is usually added as an aromatic.

### ALCOHOL AND DERIVATIVES.

Alcohol, or distilled spirit, was probably introduced into Europe by the Arabians in the 10th or 11th century.[4] Apart from the several forms of alcohol that are clinical we have:

SPIRITUS FRUMENTI.—U. S.—An alcoholic liquid obtained by the distillation of the mash of fermented grain, such as Indian corn, rye, wheat and barley, or their mixtures. To conform with the official requirements whisky should be at least four years old and comply with a number of physical requirements and chemical tests that are now provided.

SPIRITUS VINI GALLICI.—U. S.—Brandy. This is an alcoholic liquid obtained by the distillation of the fermented unmodified juice of fresh grapes. Like whisky it should be at least four years old and should conform to the tests for identity and purity that are described in the Pharmacopeia.

ÆTHER.—U. S.—Ether or ethyl oxid was discovered by Valerius Cordus, about 1540, and described as "Oleum vitrioli dulci." The preparation appears to have been entirely forgotten and was rediscovered by Frobenius, a London apothecary, about 1730.

Sulphuric ether, the name given it at that time, although long known to be a misnomer, is still retained in connection with commercial varieties of the substance.

Average dose: 1 c.c. (15 minims).

SPIRITUS ÆTHERIS.—U. S.—This contains 32.5 parts of ether and 67.5 parts of alcohol.

Average dose: 4 c.c. (1 fluidram).

Alcohol in the form of whisky or brandy is much used in shock or collapse in connection with other agents such as strychnin and digitalis. Its value is strongly asserted by some authorities and disputed by others. Ordinary doses of alcohol have little effect on the circulation in animals, but clinical evidence seems to prove that alcohol does possess some value in the conditions mentioned, particularly when a very brief respite for the heart tides over a crisis. Spirit of ether may be given by the stomach, or used by hypodermic injection, and probably acts reflexly on the centers in such cases.

### ERGOT.

Ergot has been recommended in shock and in hemorrhage in inaccessible locations. The use in the latter condition is based on its undoubted power of causing vasoconstriction in certain areas. It is much less useful than strychnin in shock because of its slow action, and in hemorrhage there is no

4. According to Pereira the Arabians obtained their knowledge of distilled spirit from the Chinese, who knew and used distilled spirit at a much earlier period.

reason to expect a greater vasoconstriction at the bleeding point than elsewhere and a rise in the general blood pressure beyond that necessary to sustain the circulation in the medulla, is contraindicated in hemorrhage. This, of course, does not apply to postpartum hemorrhage, because ergot has a specific action on the uterus, causing a firm contraction and thereby closing the bleeding vessels by compression.

Sollmann and Brown have recently studied the action of ergot when injected intravenously into dogs.[4] They found that it influenced the general circulation but little, particularly when the blood pressure was much lowered. They found that it caused a temporary fall in the blood pressure with speedy recovery, generally followed by an unimportant rise. The effects were mainly due to the action on the heart, as the vasomotor action was very slight.

The further discussion of its obstetrical use does not belong here.

ERGOTA.—U. S.—The sclerotium of *Claviceps purpurea*, gathered from rye, and not more than one year old.

While ergot had been used in Germany for centuries as a household remedy, it was not generally recognized as an efficient drug until some time after 1777, when Desgranges published several essays on the use of ergot.

The vasoconstrictor properties of this drug appear to be due to the alkaloid cornutin, discovered by Kobert in 1884, and more fully described by Keller in 1894.

EXTRACTUM ERGOTÆ.—U. S.—This is a hydro-alcoholic extract of ergot partially purified by the addition of hydrochloric acid subsequently neutralized with sodium carbonate. It should represent eight times its weight of ergot.

Average dose: 0.25 gm. (4 grains).

FLUIDEXTRACTUM ERGOTÆ.—U. S.—This is directed to be made with diluted alcohol that has been acidified by the addition of acetic acid.

Average dose: 2 c.c. (30 minims).

VINUM ERGOTÆ.—This represents 20 per cent. of the fluidextract of ergot in fortified white wine.

Average dose: 8 c.c. (2 fluidrams).

Ergot is preferably given in the form of the fluid extract without other additions. There are a number of water-soluble preparations on the market at the present time that are intended for hypodermic use, which, it is claimed, possess all the active principles of ergot, without the odorous and nauseating contaminations.

## New Instruments

### SOME MASTOID INSTRUMENTS.

AND SOME APPLIANCES FOR EAR WORK.

FRANK ALLPORT, M.D.

CHICAGO.

#### A MIDDLE EAR SYRINGE.

Practically all middle ear syringes are unclean and frequently out of order. I submit one of glass and rubber that can always be ready for use, and which is so cheap that the surgeon can afford to possess a number of them (Fig. 1). An objection has been raised to it that the point is not large enough to enter minute perforations of the drumhead. In answer to this I contend that no middle ear should be irrigated through a minute drumhead perforation. Such tympanic irrigations should be confined to those cases where the irrigating liquid can find a ready exit, otherwise dangerous complications are likely to ensue.

#### A MASTOID PERIOSTEOTOME.

In stripping the mastoid process of its periosteum after the primary incision has been accomplished, an effort should be made to preserve all possible periosteum. This purpose is liable to be defeated by the sharp scraping instruments usually employed, which tear and mangle the periosteum. I desire to recommend the instrument shown in Figure 2 as one that can be passed underneath the periosteum, thus lifting and not tearing it from the bone. It has a small end and a large end, and the latter should be used where much force is indicated. This instrument can not be used when the lower portion of the mastoid is to be cleaned, for at this portion of the bone the roughened surface and tendinous attachments of the muscles make the soft tissue cling to the irregular bone surface with such tenacity that one of the scraping periosteotomes and a pair of strong scissors must be used. My instrument, however, can be used at all other portions of the bone.

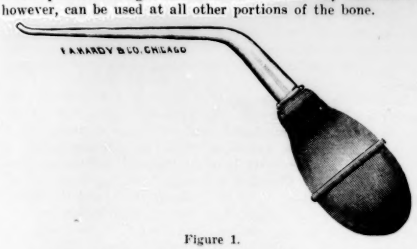


Figure 1.

The narrow end of the instrument has been gently concavo-convexed to fit the bony external auditory canal, and is used in the radical mastoid operation to pass between the cartilaginous and the bony meati, in order to separate them thoroughly and facilitate the subsequent steps of the operation. This instrument is not useful in secondary mastoid operations where dense cicatricial bands connect the soft tissue with the bone.

Figure 2.

#### A PERMANENT NEEDLE.

Having been much troubled with the breaking of needles in closing mastoid wounds, I have for a long time used the instrument shown in the drawing (Fig. 3). Near the point of the needle is a small opening, that can be opened and closed by pressing the button near the handle. The needle is pushed through the soft tissue with the small perforation closed, the suture is then doubled and placed in the opening, which is

Figure 3.

then closed. The needle is then withdrawn with the suture and one end of the suture pulled through when the suture will be ready for tying. I use this instrument only in my buried catgut sutures in the radical operation, as for closing the outside lips of the wound I use the metal sutures proposed by Michel.

#### THE MICHEL SUTURES, ETC.

For closing the external lips of the mastoid wound I have

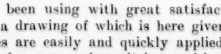

Figure 4.

for some time been using with great satisfaction the metal Michel suture, a drawing of which is here given (Fig. 4).

These sutures are easily and quickly applied, scarcely ever produce stitch abscesses, and result in a quicker healing and a more imperceptible line of cicatrix than any sutures I have ever employed. Several instruments or appliances are neces-

Figure 5.

sary for their advantageous employment, viz., a wire suture holder which enables the surgeon to conveniently take hold of the suture, a strong pair of forceps (Fig. 5) with points so constructed as to grasp and hold firmly the suture and to

4. THE JOURNAL A. M. A., July 22, 1905, p. 229.

grasp and hold the two sides of the wound forcefully, and a pair of forceps (Fig. 6) for removing the sutures after the wound has healed. The two ends of the removing forceps are pointed so that one end may be gently insinuated underneath the middle of the bent suture after it has been holding the soft tissues together for a few days. The two blades of the forceps are then brought firmly together at the middle of the suture, one blade being underneath and the other over the suture; this, of course, will cause the two outer ends of the suture to separate, thus removing the sharp points from the

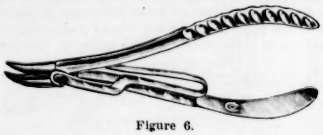

Figure 6.

flesh. The suture is now liberated and may be cast aside or straightened out and used again.

In applying a suture it should be held on the wire loop or suture holder by an assistant, the surgeon should grasp the suture with the forceps and pull it off from the loop, an assistant should grasp the two lips of the wound with strong forceps, bring them together and hold them up, thus approximated, as prominently as possible for the benefit and convenience of the surgeon, who should now forcefully clamp the suture around the lips of the wound, and bring the two

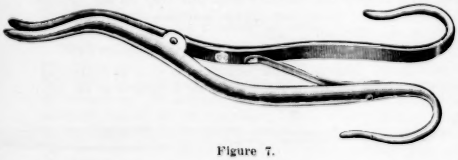

Figure 7.

ends of the suture, armed with the little needle points, as close together as possible by firm pressure of the strong forceps. Five or six sutures are usually sufficient, even in a large mastoid wound. I usually remove about half the sutures in three days and the remainder in six or seven days.

### A MEATAL DIVULSOR.

For those who split the cartilaginous meatus after the method of Panse in producing healing flaps after the radical mastoid operation the instrument here shown will prove of value (Fig. 7). A grooved director is used by some to guide

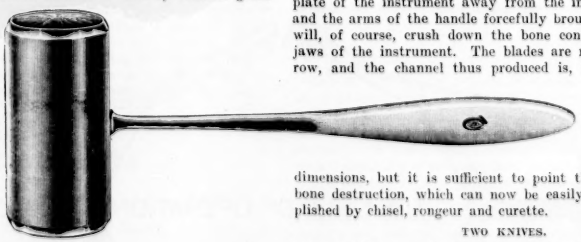

Figure 8.

the knife, strong forceps, widely spread, by others, but for a long time I have used the "meatal divulsor" as I call it. The instrument is introduced through the meatus and passed through to its further end and spread so that the cartilaginous meatus is placed on a stretch. A knife can now be passed into the tympanic end of the meatus and the cartilaginous wall easily and accurately severed up to the desired point at the conchal rim, spreading the divulsor more and more as the incision advances toward the concha.

### A METAL COVERED WOODEN MALLET.

For mastoid work a silver or lead mallet is too heavy and harsh, and a rawhide mallet is too soft and soon becomes useless from boiling; a wood mallet also becomes cracked and worthless from boiling. I employ, therefore, a good-sized mallet made of lignum vitæ, encased in steel, with a strong steel handle. It is imperishable and thoroughly satisfactory (Fig. 8).

### A BONE CRUSHER.

An important step in the radical mastoid operation is the breaking down of the posterior wall of the meatus. Injury to the facial nerve, semicircular canal, etc., may follow this procedure. The complete clearing away of the upper portion of the bony meatus, without injury to surrounding parts, is much facilitated if a small pathway through the bone to the tympanic cavity, etc., can be distinctly blazed by some instrument. I have found the "bone crusher" (Fig. 9), to be of

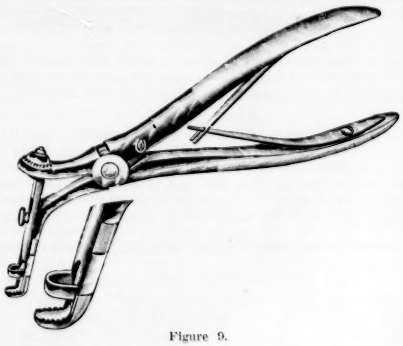

Figure 9.

great service for this purpose. Before using it the mastoid cavity, antrum, etc., should be thoroughly curetted and cleaned. The crusher has not sufficient power and strength (and should not have) to break down the entire thickness of meatal wall. The surgeon should proceed, therefore, as if expecting to destroy the meatal wall with the chisel and mallet alone, and carve away a considerable portion of the bony wall with these instruments. After, perhaps, one-half of the work has been accomplished, the footplate of the crusher should be carefully insinuated through the antrum to the middle ear, the handle firmly depressed so as to raise the footplate of the instrument away from the inner tympanic wall, and the arms of the handle forcefully brought together, which will, of course, crush down the bone contained between the jaws of the instrument. The blades are not broad, but narrow, and the channel thus produced is, therefore, of small dimensions, but it is sufficient to point the way for further bone destruction, which can now be easily and safely accomplished by chisel, rongeur and curette.

### TWO KNIVES.

One of the recognized defects in the radical mastoid operation has been the deformity often produced by an abnormally wide and gaping meatus. This trouble I have been able to dissipate entirely by the use of two knives, which I will now describe, my description referring, of course, as will be seen, to the Panse flap which I use to the exclusion of all others. After everything is ready for flap making and wound closure I insert the double-edged knife (Fig. 10) into the raw posterior portion of the auricle, as near as possible to the middle edge of the meatus. The knife is carefully pushed forward

and made to reappear at the middle of the meato-conchal edge; after enlarging the opening a little the knife is withdrawn and the blunt-pointed knife (Fig. 11) is made to take its place, as the seesaw movement necessary to finish the incision up and down would be likely to produce multiple punctures on the other side of the meatus. The blunt point of the

Figure 10.

other knife renders the subsequent procedures free from such embarrassments, and the fact that the blade convexes forward on the edge enables the surgeon to complete more effectively the remote corners of the incision. The knife should be carried up as far as desired, and then down, always keeping in view the meato-conchal edge, and keeping the line of incision exactly on this edge. In this way the meatal opening is enlarged only a trifle, and the surgeon can be absolutely sure

Figure 11.

that a constant and non-deforming result will occur. The backward incision along the cartilaginous meatus can now be completed by the divulsor and knife as already described.

### A GAUZE PACKER.

A good instrument for packing gauze is desirable not only at the time of the mastoid operation, but more particularly at the subsequent dressings. I have already described the packer here shown, but as two important modifications have been made in it, I venture to refer to it again. It has a cone-shaped point, flat and round at the distal extremity, which

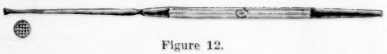

Figure 12.

gradually diminishes in bulk as the shank of the instrument is reached, thus enabling the operator to pack down firmly the gauze without any tendency to displace the packing as the instrument is withdrawn. The narrow portion of the shank as formerly made was flexible; it is now stiff and firm. The distal end used to be smooth; it is now roughened and catches the gauze better.

### A HOOK PROBE.

I have described this hook probe some years ago as a useful instrument for finding and dislocating the ossicles in the

Figure 13.

operation for ossiculectomy, and also as a generally useful ear hook and probe. I now, however, find it exceedingly efficacious in the mastoid operation as a probe for the detection of carious spots, and especially for locating openings in the roof of the tympanum, aditus, or antrum. It consists of a slender shank, bent at right angles at the end and tipped with a small round ball (Fig. 13).

### THE MASTOID RETRACTOR.

I trust I may be pardoned for referring again to my mastoid retractors, now in general use for so many years (Fig. 14). They have been modified somewhat of late by making them much stronger so that they possess great power and do not break. The skin incision should be long enough to allow the operator to place two pairs of these retractors in the opening, one pair in the upper angle of the wound and another pair in the lower angle. The teeth of the arms of the retractors

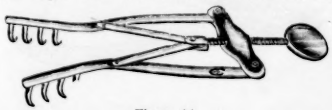

Figure 14.

should be placed underneath the periosteum and the arms should then be expanded to their utmost limits by turning the thumbscrew at the base of the instrument. I rarely use an artery forceps, and when both retractors are thus widely separated a perfect and comparatively bloodless field of operation is observed between the four arms of the two retractors. Some operators still employ the old hand retractors, one for each side of the wound, but these retractors necessitate extra hands and arms around the operative field, and they do not control hemorrhage, and no one can always maintain steady and uniform hand retraction.

### A PILLAR SEPARATOR.

Robertson's pillar separator usually acts well in separating the pillar from the tonsil preparatory to a removal of the lat-

Figure 16.

ter, but it does not always cut well, which is embarrassing to the operator and frequently painful to the patient on account of the forcible dragging of the blade on the yielding soft tissue. I beg to suggest a knife with a wavy blade, like a bread knife, which, when sharp, by the use of a gentle to-and-fro movement, easily and comparatively painlessly cuts the soft tissue without much effort (Fig. 16).

### A BEDSIDE TRAY.

It would seem easy to purchase a small and convenient tray for carrying a few eye and ear instruments, solutions, cotton, etc., from bed to bed in a hospital, and yet a faithful search

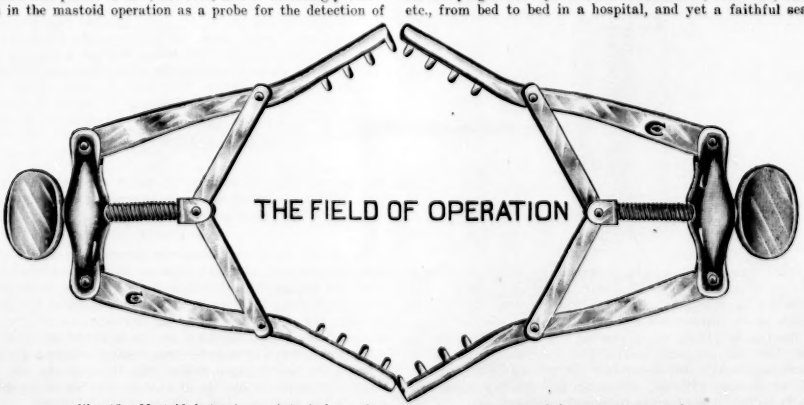


Fig. 15.—Mastoid Retractors. Actual size and properly opened and placed for operative procedures.

in instrument stores has failed to produce one. I beg, therefore, to suggest one, so simple that apologies seem necessary for the suggestion, and yet one that has seemed to answer satisfactorily the purpose for the past year at St. Luke's Hospital (Fig. 17). It is simply a small tray with a shelf for holding a few bottles, and a space of sufficient size for holding miscellaneous articles such as droppers, gauze, cotton, instruments, etc. I think it undesirable to make many partitions in a small bedside tray like the one under consideration,

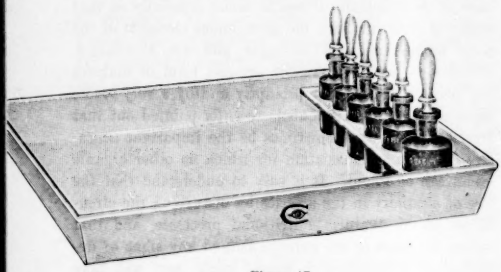

Figure 17.

and have found it much more convenient to lay in the one large space such articles as are absolutely necessary in a tour of the hospital.

A EUSTACHIAN BUR.

Curetting the tympanic orifice of the Eustachian tube is an important part of the radical mastoid operation, as, if this is not done, granulation tissue usually remains and a mucous secretion from the unclosed tube may become a constant and annoying sequel of the operation. This little procedure may be accomplished with a small, sharp spoon curette, and Whiting has devised a conical shaped bur which quickly rims out the orifice. I have, however, found his bur to be over-large for the purpose, and I do not like the conical shape of his bur, as

Figure 18.

it may be too energetic in its action, especially when attached to such a strong handle which not only invites undue force, but also obstructs the view of the bur and tube, which should always be kept in sight. I, therefore, use a bur (Fig. 18) with round outlines, which, it would seem, is capable of doing less harm, and also one possessing a straight handle (without a hand crossbar as in Whiting's), which can be rolled between the fingers when rimming out the tube orifice. It is not likely that much force will be employed in using this instrument, and the bur and tube can always be kept clearly in view.

## Clinical Notes

### TETANUS FOLLOWING VACCINATION

A. H. CHURCHILL, M.D.

ST. CHARLES, ILL.

*Patient.*—E. M. B., aged 5½ years, female, in perfect health, living in the country on a farm, was vaccinated Jan. 11, 1906, on left arm with P. D. & Co.'s vaccine from tube. Antiseptic precautions were taken.

*History of Disease:*—The child was not seen again until January 30, when the following history was obtained: The arm had been but slightly swollen and the child had felt well during the entire time since vaccination. She got up on the morning of January 30, apparently well, sat at table, and ate some breakfast. She seemed to have slight indisposition during the morning, but at noon she drank coffee and milk. During the afternoon the mother said the child wished to lie down and that she noticed some stiffness of the neck.

*Examination.*—I saw the child at 6:30 p. m. and found some rigidity of the left arm, and considerable rigidity of the neck and jaw. The teeth could be parted about half an inch. There was no rigidity of the right arm or of the back below the neck, or of the legs or abdominal muscles. The child could swallow perfectly.

*Course of Disease.*—The child was seen again at 1 a. m., January 31. She had had two severe spasms in which she threw herself about in bed, but she was rational when seen. The left arm was some more rigid. The right arm and legs were still normal. Temperature still normal, and the child could still swallow easily. At this time there were muscular tremors through the abdominal muscles, causing her to cry out with pain. From the onset of the symptoms till death occurred there was no movement of the bowels and no urine was passed. The child rapidly grew weaker until 9 a. m. on January 31, when she died, not quite twenty-four hours from the manifestation of the first symptom. There was no post-mortem. The arm, on examination, showed vaccination not doing well. A wound half an inch across, edges indurated and undermined, with a foul discharge.

*General Remark.*—At the time the vaccination was done the arm was scrubbed with soap and water, and then with alcohol. The scarifying was done with a sterile scalpel, and the vaccination was covered with sterile gauze. From that time the parents took care of the arm, as is practically always the case in the country. I did not see the child from the day I did the vaccination till three weeks later. The arm had not been troublesome, so the parents had not thought it necessary to bring the child to my office. Of course, it is possible that the infection gained entrance at some other point, but as the vaccination wound was the only open wound, I considered that must have been the source of infection. I certainly believe that the infection occurred after the vaccination and entirely independent of it, as all authorities, so far as I find, give ten days as the limit of the period of incubation, and this, as I have stated, was just three weeks after I sent to Chicago for antitoxin. The little girl died before this arrived, however. I have not seen a case recorded in which death took place so soon after the first manifestations of tetanus.

### THE PULMONIC SECOND SOUND, IN HEALTH AND DISEASE.

IRVIN HARDY, M.D.

BALTIMORE.

While due attention has been given to the difference existing between the pulmonic and systemic circulations, as a result of pulmonary consolidation, there seems to be a scarcity of comment regarding a comparative lessening of intra-aortic blood pressure.

By experiment and observation I have found in healthy individuals what appeared to be an accentuated pulmonic second sound which would disappear on having the patient walk briskly for a few minutes.

The point I wish to make is that healthy people who are inactive, engaged in sedentary occupations, have an apparent accentuated pulmonic second when in reality it is only a relative one, due to lessened intra-aortic pressure, the result of deficient exercise. Use is made of exercise to bring out signs of disease of the valve segments, but I have seen no literature bearing on this subject. What theory one may have, the fact remains, or at least is constant enough, to keep one on his guard.

If this be true, it would seem that too much stress has been laid on this sign as an early indication of pulmonary tuberculosis, thus giving an opportunity, at least, for misleading conclusions.

742 West Fayette Street.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance
[*For other information see second page following reading matter.*]

SATURDAY, APRIL 14, 1906.

## WEIGHT AND HEALTH.

There is probably no better—certainly there is no simpler—sign of the condition of an ordinary individual's health up to middle life than his weight. There is no absolute measure of weight for each individual, for it depends on personal peculiarities and on family characteristics; but a definite idea of what any individual's weight should be according to his height can be obtained, and then variations from this normal are important indications of the state of health. This is especially true with regard to children. Children's weight should bear a definite relation to their height, there being a slight difference between males and females in this respect, and with the increase in height there should be a corresponding increase in weight. Any variation from this should at once give rise to the suspicion of a distinct impairment of physical condition and should be the signal for lessening the burdens, educational, laborious or athletic, that the growing child has to bear. Notwithstanding its importance, however, weight is apt to be neglected in the list of symptoms presented to the physician. A mother will tell much about the child's habits, waking and sleeping, and much more about the tendencies that the child is supposed to inherit, but she is not apt to have noticed anything with regard to the child's weight nor to know whether there has been a cessation of that normal increase which accompanies growth in healthy children.

Weight, however, is almost as important in adults. For many years insurance companies throughout the world, in the examination of applicants, have been particular in learning his height, weight and family characteristics in these matters. At least one company announced some years ago that it considered a lesser weight than normal as of more significance with regard to the possible development of tuberculosis than a family history of this disease when the individual to be insured was not at the moment living with those members of the family who were sufferers from tuberculosis. It was definitely proclaimed that to be 20 pounds under the weight that a man should have for his height was more important in its possible danger of permitting or encouraging the development of tuberculosis than a history of this disease on both sides in the direct line in the preceding generation. The more recent ideas with regard to the contagiousness of tuberculosis have confirmed this notion, for it is definitely understood that it is people run down in weight who are most likely to contract the disease.

There are other and more distinctly nutritional affections in which loss of weight may often be one of the earliest and most important indices of the disturbance of the physical condition. In the insidious forms of diabetes, for instance, loss of weight in spite of the presence of good appetite seems to occur especially in that group of cases in which the nitrogenous elements of the body become changed to sugar and are eliminated. Needless to say these are the severest form of diabetes and need to be cared for promptly and by a very severe regimen. Dr. Richard Cabot[1] recently pointed out that arteriosclerosis may sometimes be the important causative factor in an emaciation for which no other organic lesion can be found. It is easy to understand that the loss of elasticity in the arteries by disturbing the circulation would diminish nutritional processes, and that before the heart or the kidneys showed any signs of degeneration a reduction in weight might very well take place. In these cases it is especially important that the condition should be recognized as early as possible, so that all overexertion and the ingestion of material that may prove irritant in the course of metabolism and excretion may be avoided.

In functional affections it is recognized that a loss of weight emphasizes symptoms to such a degree as to add greatly to the discomfort of the patient. Many a nervous dyspeptic suffers more from an irritable condition of nerves produced by lack of proper nutrition than from any other cause. After a time in many persons, because of the discomfort felt during digestive processes, what Einhorn has called sitophobia, a species of fear of food develops, which leads to such a reduction in the amount of nutritive material taken as eventually to induce in the patient a mild form of inanition. A distinguished authority in nervous disease said many years ago that more of the discomfort of nervous patients could be relieved by having them eat a hearty breakfast every day for a time than by any other single procedure known to medicine. Certain it is that when there has been a notable reduction of weight, relief of functional nervous symptoms will not be secured until the weight has been regained.

Practically this makes the scale an instrument of precision that may be an important diagnostic aid as regards the general physical condition, as all physicians have found it who have come to use it in practice. It is of as much value for diagnostic purposes in obscure cases of malnutrition as is the thermometer in febrile conditions. The weight record over a prolonged period is often the best evidence that can be studied of the general condition. There seems no doubt but that in the more accurate record keeping of cases which is coming into vogue the weight variation and its connection with symptoms will be considered of as great importance as other and more difficult modes of observation.

1. THE JOURNAL A. M. A., March 17, 1906, p. 763.

## URIC ACID AS A BUSINESS PROPOSITION.

The advertising pages of medical journals, the pamphlets that are deposited each day on our desks, the oratory of the ubiquitous detail man, teach us to beware of uric acid.

If we are to believe all that we read and hear, uric acid is a virulent poison, one that causes a protean array of symptoms while it circulates and a very chaos of trouble when it becomes deposited in the tissues; we are exhorted to heed this warning and to prescribe this, that and the other uric acid dissolvent or eliminator in order to rid the organism as rapidly as possible of this dangerous body. Our patients, too, have been taught to inform us that they are "full of uric acid" and must have something to get rid of it. How can it be otherwise if they believe even a part of what they are told in newspaper advertisements by certain "patent medicine" and lithia water vendors.

When we prescribe a medicine we should at least know for what we are giving it and how it is expected to act. Whoever orders so-called uric acid solvents and eliminators presumably believes that uric acid is a poison and the cause of many diseased conditions, that it needs dissolving and eliminating, and that the drug or water he orders can accomplish both these desired purposes. An analysis of the premises on which this so-called therapy is based and of the principles that are supposed to underlie it shows that both are fundamentally fallacious and inconsistent.

The error must be immensely popular, however, and the dissolving of uric acid must be a good business proposition or else so much money would not be expended by practical business men in exploiting dissolvents.

As a matter of fact, uric acid acts pathologically in gout presumably only on account of its tendency to form concretions. The immediate factors that determine the precipitation of crystalline urates in the joints, the kidneys and in other organs of predilection are independent of the circulation in excess of soluble urates; for the urates are often enormously increased in the blood without the appearance of gouty symptoms and without the deposit of urate concretions. The most notable example of this kind is leukemia, in which figures for circulating and urinary uric acid are obtained that are far in excess of those ever observed in gout, but in which urate concretions never appear. On the other hand, typical gouty lesions occur in which no urate deposits are found, and in many cases of gout neither the uric acid of the blood nor of the urine is increased.

The injection of uric acid or its salts into the veins or directly into the joints never produces a syndrome similar to gout, nor does feeding with nuclein-containing foods, with pure nuclein or with uric acid, produce any abnormal clinical signs whatsoever beyond temporary flooding of the blood and the urine with uric acid. Uric acid, when injected in a concentrated form under the skin, may, it is true, produce local inflammation followed by necrosis, but this effect must be attributed quite as much to its slightly acid character and to the mechanical irritation of the sharp crystals of uric acid as to any specifically poisonous effect.

The factors that produce the necrotic areas on which secondary deposits of urates occur are not well understood. It is possible that they vary in different cases, that they may be of a specific, infectious, or of a toxic character. Locally, there is usually some sluggishness of the blood stream that, combined with changes in the relative proportion of the acid and basic phosphates (and carbonates) of the blood, may favor urate deposits; for uric acid is soluble in basic phosphates and insoluble in acid phosphates, so that the preponderance of the latter may determine the decreased solubility of uric acid and hence favor its precipitation, provided a suitable nidus, such as a necrotic area, is provided for its deposit. This will occur whether there is an excess of uric acid in the blood or not.

If the rôle of uric acid is relatively subordinate in true gout, how insignificant it must be in that huge array of vague symptoms, involving almost every organ and function of the body, and grouped under the indefinite name of "uric acid diathesis"! Here the rôle of circulating uric acid is altogether in doubt, for there is practically no tangible evidence to show that the amounts of circulating or excrementitious uric acid vary from the normal. Most of the syndromes that are attributed to the so-called uric acid diathesis are based on some derangement of the bowel, some hepatic insufficiency, possibly slight metabolic disturbances or some neurotic element, and are often accompanied or followed by a reduction of the alkalinity of the blood.

In view of the very subordinate rôle of uric acid in the pathogenesis of gout and allied conditions and the manifold and varying factors that determine its excretion and precipitation in the urine, it is clear that treatment directed exclusively toward the reduction of the uric acid excretion is wrong.

It has been shown,[1] moreover, that the absolute amount of uric acid excreted is no true index of the amount of circulating uric acid, for the kidneys possess to a very marked degree the power of destroying uric acid, so that, even if uric acid were present in excess in the blood, this might not at all become apparent in the urine. Above all, the amount of precipitated urates is no index whatever of the amount of uric acid present in the urine, though commonly interpreted in this way. The deposit of a urate sediment is largely dependent on the relative proportion of basic, neutral and acid salts of the urine, its temperature and its concentration, so that the urine may contain abundant urates and remain quite clear, or it may contain relatively little uric acid and deposit a copious precipitate. As fluctuations in

1. Mendel: THE JOURNAL A. M. A., March 24 and 31, 1906.

the uric acid excretion are considered the main index of the success or failure of so-called uric acid treatment, it is apparent that all conclusions in regard to the efficacy of this treatment based on the urinary uric acid excretion or precipitation must be utterly fallacious.

We intend to refer to this matter again shortly.

## PROFUSE HEMATURIA AND RENAL COLIC IN CHRONIC NEPHRITIS.

The occurrence of small, usually microscopic, quantities of blood in the urine of chronic nephritics is so common that it is almost to be expected if a case is followed long enough and carefully enough. Attacks of profuse hemorrhage from the kidneys, in the absence of trauma, usually lead us to think of stone, tuberculosis, or new growth; or, as a more unusual cause, a floating kidney. The fact that an ordinary chronic nephritis, either parenchymatous or interstitial, may be associated not so very infrequently with profuse hematuria or attacks of colic has not been generally recognized.

The subject has been recently studied by Askanazy,[1] who was able to collect from Lichtheim's clinic alone eleven cases, three of which came afterward to the postmortem table. A study of these cases and of the literature showed that the condition is far from being uncommon, though the hematuria and colic are not always ascribed to nephritis in reporting the cases. The hematuria occurs in some cases but once, or at any rate at very long intervals, in other cases it may occur frequently at relatively short intervals. In many instances, no immediate cause for the hemorrhage is apparent, but some writers have ascribed it to exposure or to cold, and others have tried to incriminate the strenuous physical life, and especially prolonged marching. The attacks usually come on with great suddenness and may or may not be associated with pain. In some instances the blood disappears as rapidly as it appeared after a few hours, but in other cases the blood remains present, at any rate in microscopic quantity, for several days. More rarely, severe hemorrhage may persist for months or even as long as a year.

The presence of pain with the hemorrhage is not constant, and the reverse is also true. When pain is present it may be dull and constant with exacerbations, or it may simulate by its acuity the most severe attacks of renal colic. In the latter instance, general symptoms, such as dizziness, vomiting, chills, and even fever, may accompany the pain and render the resemblance to renal colic still more striking. Usually the pain is situated in the kidney region on one side, and either side may be affected with equal frequency; rarely the pain is bilateral. Radiation of the pain to the genital organs or along the ureters, such as is commonly seen in renal colic, is not infrequently observed. At times the pain is not referred to the kidney region at all, but is situated in the lower zones of the abdomen or in the region of the bladder.

Both the attacks of pain and the severe hematuria occur in male nephritics much more frequently than in females. This is probably due to the greater exposure of the male sex to cold and the effects of physical overexertion. The occurrence of hematuria and colic with nephritis most commonly between the ages of 30 and 50 is presumably due to the fact that the disease is most frequent between these ages.

The cause of the colic and the bleeding has led to a good deal of discussion. The colic, in some instances, is doubtless due to the lodgment of clots in the ureter, for in some cases these have been passed after an attack. As the colic can occur without hemorrhage, this, however, can not always be the cause. Israel thinks that both colic and hematuria are due to an acute paroxysmal congestion, and Askanazy supports this view. Others have held that the process is in the nature of an acute angioneurotic edema, and still others that crystals in the urine, if numerous enough, can cause the symptoms even in the absence of definite stone. Whatever the cause, the incidence of the condition should be recognized, as it is one likely to lead to mistakes in diagnosis.

1. Zeitft. f. klin. Med., 1906, vol. lviii, p. 432.

## VACCINATION AGAINST PLAGUE.

It is rather curious that in the fight against infectious diseases in the human being vaccination in the true sense has been used but little, aside from its use as a preventive of smallpox. In the sense meant by Jenner and Pasteur, vaccination refers to inoculation with a living organism of attenuated virulence, and it seems desirable in the interests of lucidity that the term should be so restricted and should not be employed to designate forms of protective inoculation in which killed organisms or their extracts are employed.

We have frequently pointed out in these columns the difference between diseases due to bacteria which excrete their toxins and those due to bacteria in which the toxins are intimately associated with the body of the bacterial cell. Most human infectious diseases are caused by bacteria of the second group, and, as it is in animal diseases of this group that true vaccination has been most successful, it would seem likely that the same would be true of human infections of this type. Aside from the difficulty often experienced in getting human beings to submit to preventive inoculations with attenuated viruses, the physician himself, no doubt, feels some hesitation in employing this method, on account of the fact that it is difficult to be sure that the organism to be inoculated is sufficiently attenuated, and that all risk of causing a fatal attack of the disease can be eliminated.

The history of attempts to vaccinate against plague is not modern, for the plan was tried in the eighteenth century, but with disastrous results. From the experimental standpoint the subject has been attacked by in-

dependent investigators and by the plague commissions of recent years, but until recently the risk of producing a fatal issue was still too great to think of applying the results of the experiments to man. Part of the difficulty in plague has been in finding a method by which the plague bacillus could be successfully attenuated, but this has apparently been accomplished at last both by Kolle and Otto and by Strong.[1] The latter observer, after carefully testing his cultures on animals, made a series of inoculations into prisoners sentenced to death, with no deleterious results. The plague bacilli, suspended in salt solution, were injected into the depths of the deltoid muscle, and caused a slight induration, mild fever lasting for two or three days, and a leucocytosis. Suppuration at the point of injection never occurred. The study of the agglutination reactions and the testing of the serum on the lower animals gave abundant evidence that the vaccinations were effective. So far as animals are concerned, Strong states that vaccination is by far the most effective form of inoculation.

In bringing the matter to the attention of the medical profession, Strong warns against the use of any strain of pest bacillus except one which has been properly attenuated and thoroughly tested on animals. Unless the utmost care be taken, untoward results will surely follow, for it is extremely difficult properly to attenuate the plague bacillus; in fact, the process may take years. The reports of Kolle and Strong are of great interest and hold out the hope that in time we may be able to protect against plague as efficiently as we now do against smallpox, and with no more risk.

## EDEMA OF THE LUNGS AS A COMPLICATION OF ETHER NARCOSIS.

To the surgeon who operates frequently, the induction of inhalation narcosis becomes a familiar and consequently a comparatively simple procedure. That it is by no means so will be readily understood from a consideration of the physiologic conditions present, and this fact has been conclusively demonstrated by the happily not frequent fatality attending the practice, even when this was not to have been foreseen by anything short of prescience. Heart failure from the inhalation of chloroform is always kept in mind by the careful operator and anesthetist, while the possibility of respiratory failure during ether narcosis or the development of some form of pneumonia as a sequel should always receive due consideration. Edema of the lungs is a rare complication of ether narcosis, and a most interesting case of this kind is added by Dr. Victor C. Pedersen[2] to the small number that have heretofore been placed on record. The patient was a healthy man, about 30 years old, who was to be operated on for internal and external hemorrhoids. Narcosis was induced by means of nitrous oxid gas followed by ether, about one gallon of the former and four ounces or less of the latter being used. Cyanosis appeared at once and excitement was marked. During the operation, which occupied twenty minutes, the color was satisfactory, and there was no evidence of undue accumulation of mucus in the respiratory passages. Cyanosis reappeared when after the operation the patient was restored to the dorsal decubitus, and soon respiration appeared about to fail. Auscultation disclosed the physical signs of acute edema of the lungs. Atropin, grain 1/25, was administered hypodermically, the foot of the bed was elevated to an angle of about 15 degrees, dry cups were applied extensively to the chest, strychnin sulphate, grain 1/20, followed by whisky, was administered hypodermically, inhalation of oxygen was practiced, and nitroglycerin, grain 1/25, was injected beneath the skin, and finally the foot of the bed was raised to an angle of 30 degrees. Improvement became evident in the course of forty minutes and continued to perfect recovery. The admirable behavior of the heart prior to the development of the edema makes it probable that the latter was primarily and directly due to the irritation of the air vesicles by the ether. In view of this fact, the greatest care should be exercised in the administration of ether by inhalation in order to avert this danger. The common practice of pushing the anesthetic when resistance appears during the stage of excitement should be abandoned in favor of a gradual and steady administration. The report of this case teaches, further, the importance of physical examination of the chest following ether narcosis, as by this means an edema of the lungs may at times be recognized that would otherwise escape observation, and even perhaps progress to a fatal termination.

1. The Philippine Jour. of Science, 1906, vol. 1, p. 183.
2. Ann of Surg., January, 1906, p. 35.

## THE METABOLIC FACTOR IN THE ETIOLOGY OF THE PAROXYSMAL NEUROSES.

Migraine, asthma and epilepsy, in addition to their periodicity of recurrence and a certain interchangeability, have in common the peculiarity that the paroxysm is not infrequently preceded by phenomena of functional derangement of one sort or other, which disappears with the attack, suggesting the possibility of some disturbance in the body chemistry as the exciting factor. These phenomena, in the opinion of Dr. Francis Hare,[1] are dependent on variations in the intake and output of carbon dioxid. The disorders mentioned also exhibit certain relations to acute articular gout. Accordingly, Hare formulates the hypothesis that all the affections named are due primarily to an accumulation of unoxidized or imperfectly oxidized carbonaceous material in the blood, the paroxysm being a conservative measure adapted to the dispersion of such an accumulation. To this condition he gives the name hyperpyremia, and from a series of observations he develops the generalization that whatever tends to reduce the carbonaceous income or to increase the carbonaceous expenditure of the blood tends to the dispersion of the paroxysm, while whatever tends to increase the carbonaceous income or to decrease the carbonaceous expenditure of the blood tends to initiate, precipitate or intensify the paroxysms of migraine, asthma and epilepsy. Accordingly, the

1. Practitioner, February, 1906, p. 179.

conclusion is reached that hyperpyremia is a common humoral factor, at least in some cases, of the special pathologic variation of vasomotor action on which depend the attacks of migraine, asthma and epilepsy. Paroxysms of these affections can be viewed in the light of conservative, though not necessarily salutary, reactions adapted to dispersion of the hyperpyremia. Hyperpyremia implies relative failure of the physical functions that together comprise the carbonaceous expenditure of the blood.

### THE CAUSE OF BERIBERI.

The importance of a knowledge of the etiology of a disease before satisfactory steps can be taken to prevent it has never been more forcibly demonstrated in recent years than in the experiences of the Japanese army with beriberi. It is hardly necessary to speak of the success which the Japanese had in preventing the spread of the infectious diseases of known origin, such as typhoid fever and dysentery, for this is common knowledge, but it is perhaps not widely known that, at a conservative estimate, from 75,000 to 80,000 cases of beriberi occurred in the Japanese army. Dr. Herzog[1] of the Manila laboratory was detailed to investigate beriberi among the Japanese soldiers who had been invalided home, and in his preliminary report describes a coccus which has been isolated from the blood and excretions of patients with this disease by Dr. Kokubo of the Japanese army. Dr. Herzog is now working on the organism, and it is to be hoped that at last the cause of this mysterious and fatal disease is to be run to earth.

### THE SURGEON'S LIABILITY FOR UNAUTHORIZED OPERATION.

A Minnesota physician some time ago found it necessary, in his judgment, to perform an operation somewhat different from that which had been first intended when the patient was put under anesthesia. As a result he was sued for damages, and the case has been before the courts now four times, the first trial resulting in a disagreement of the jury; the second, in a verdict of over $14,000 damages (set aside as excessive by the higher court), and the third trial, in a verdict of $3,500 damages. This verdict has now also been set aside. The judge says that had he known the evidence at the time of the third trial as he did afterward the result would have been different. The condition of the patient (with suppuration of the ear) demanded relief, because otherwise her life would have been left in jeopardy, and physicians called as witnesses testified that the procedure used was indicated. Therefore, decided the court, the surgeon would have been subject to criticism if he had not done what he did, and manifestly it is not right that he should be wrong both in doing and in not doing a certain thing. It appears from this that a surgeon who ventures to do what was not anticipated still undergoes a risk, yet in cases where his deviation was necessary or essentially life saving and can be proved to be of that character, it is recognized that he ought not to be mulcted for damages.

1. Philippine Jour. of Science, 1906, vol. 1, p. 169.

### THE ARMY MEDICAL BILL.

The Act to increase the efficiency of the Medical Department of the Army was passed by the Senate March 29 and favorably reported by the Military Committee of the House of Representatives April 4. It has therefore reached the same stage as it did in the last Congress, when it failed because it was not permitted to come to a vote in the House. If brought before the House its passage is considered certain, but under the rules of that body this can not occur without a special rule fixing a day for its consideration. This is a matter which is well known to be in the hands of the Speaker. The reason given for his unfavorable action last year—the existence of a deficit in the Treasury—does not obtain this year. In view of the fact that this measure is considered by the War Department and the President absolutely essential to an efficient organization of the Medical Department, and that the medical profession generally is strongly interested in it, it is earnestly to be hoped that Mr. Cannon will not again assume the responsibility of preventing Congressional action on this most necessary and humane measure.

## Medical News

### CALIFORNIA.

**New Hospital.**—The new hospital at San Diego, erected by Dr. Joseph C. Hearne, was formally opened March 7.

**Medicine Vendor Convicted.**—A jury in Sacramento, March 17, found "Dr." George Hirzu guilty of selling medicine in the public streets, contrary to the city law.

**Will Not Accept Contract Work.**—The Medical Society of San Benito County has adopted a resolution that in future no member shall accept contract work from fraternal orders.

**Will Endow Hospital.**—Henry Miller, a cattleman of Gilroy, has announced that he will endow a hospital and sanatorium in Gilroy with $10,000, and will also donate ten acres of land for a site and furnish building material from his own quarries.

**Donation for Medical Books.**—Dr. W. Jarvis Barlow, chairman of the library committee of the College of Medicine of the University of Southern California, Los Angeles, has received a check for $500, to be used for the purchase of books for the library of the medical college.

**Smallpox.**—Smallpox is reported in the camps of the Yosemite Railroad, east of Merced. The secretary of the State Board of Health states that the disease is well scattered through the state and especially in railway camps.——Dr. Joseph J. Medros, Haywards, is ill with smallpox.

**Court of Appeals Decides Against Physician.**—The Court of Appeals has decided the case of B. J. Short against Dr. George K. Frink, San Francisco, in which the plaintiff sustained a compound fracture of the right leg and claimed $8,000 damages for alleged malpractice on the part of the defendant, in favor of the plaintiff, affirmed the verdict of the lower court and the award of $8,000 made by it.

**To Aid Associated Charities.**—The following 14 members of the Pasadena branch of the Los Angeles Medical Society have offered to give their services to charitable purposes under the direction of associated charities: Drs. George E. Abbott, Alva McCoy, Fitch C. E. Mattison, Charles L. King, George Deacon, John M. Radebaugh, Arthur T. Newcomb, B. C. Atterbury, Maria Congdon, Mary E. Hagadorn, Albert B. Roval, Caroline McQuiston, Zachariah T. Malaby and Thomas J. Wilson.

**Personal.**—Dr. James H. Parkinson has been elected president of the Sacramento board of health, vice Dr. Thomas Ross, deceased.——Dr. David A. Beattie and family, Santa Clara, have returned from Europe.——Dr. Elliott H. Woolsey, Oakland, was thrown from a street car, fracturing his patella.——Dr. Joseph W. James has been appointed a member of the Sacramento board of health.——Dr. Harry E. Piper, Santa Cruz, has been elected secretary of the Santa Cruz Medical Society, vice Dr. Charles L. Anderson, resigned.——Dr. Sarah I. Shuey, Oakland, is seriously ill with septicemia.

**Societies Meet.**—At the regular annual meeting of the San Joaquin Valley Medical Association, held in Bakersfield, the following officers were elected: President, Dr. George H. Aiken, Fresno; vice-presidents, Drs. Fred P. Clark, Stockton; C. P. H. Kjaerbye, Fresno, and Charles T. Rosson, Hanford; secretary and treasurer, Dr. Dwight H. Trowbridge, Fresno; assistant secretary, Dr. John R. Walker, Fresno, and treasurer, Dr. Thomas M. Hayden, Fresno. The society voted that members who accepted less than $5 for an examination for life insurance should be fined $25 for the first offense, and for a second offense should be liable to expulsion from the society. ——On March 12 the Sacramento Society for Medical Improvement gave a banquet for Dr. Gustavus L. Simmons, in honor of the fiftieth anniversary of his graduation in medicine. On behalf of the society Dr. William E. Briggs presented Dr. Simmons with a silver loving-cup. The following officers were elected: President, Dr. Henry E. Wright; secretary and treasurer, Dr. Edwin M. Wilder, and directors, Drs. Gustavus L. Simmons, Henry L. Nichols, Wallace A. Briggs, Henry E. Wright and Edwin M. Wilder, and delegates to the state medical society, Drs. William E. Briggs and James H. Parkinson, and alternates, Drs. James A. McKee and Samuel E. Simmons.

## COLORADO.

**Pneumonia Epidemic.**—An epidemic of pneumonia is prevalent among the mining camps around Ouray. During the last week in March 20 deaths are said to have resulted from the disease.

**Will Not Accept Low Fee.**—The Teller County Medical Society at its meeting, February 22, adopted resolutions setting forth that no member of the society should examine an applicant for life insurance for a fee of less than $5.

**Personal.**—Dr. and Mrs. Harry P. Packard will soon leave Denver for Persia, where Dr. Packard will take charge of the Mission Hospital at Teheran.——Dr. A. Mansfield Holmes, Denver, is convalescent after a sharp attack of pneumonia.——Dr. Edwin S. Dodds, Pueblo, is ill at St. Mary's Hospital with rheumatism. ——Dr. Gerald B. Webb, Colorado Springs, has gone from London to Vienna.

**Life Insurance Examination Fees.**—At a meeting of the Lake County Medical Association, held in Leadville, March 15, the following resolutions were adopted and signed by every practicing physician in Lake County:

WHEREAS, In consideration of the time, skill and care necessary for an examination for life insurance, we deem that the fee of five ($5.00) dollars is a fair, reasonable and just charge for such examination; therefore be it

*Resolved*, That on and after April 1, 1906, each and every member of the Lake County Medical Association shall not make any examination for Old Line Life Insurance Companies for less than the sum of five ($5.00) dollars; and be it further

*Resolved*, That such Life Insurance Companies as are now paying less than five ($5.00) dollars be notified by the Secretary that on and after April 1, 1906, no regular life insurance examinations will be made by any members of this association for less than five ($5.00) dollars; and be it further

*Resolved*, That any member who violates this resolution shall be suspended from the association; and be it further

*Resolved*, That it shall be unlawful for any member of this association to consult with any physician so suspended.

## GEORGIA.

**State Association Meeting.**—The Medical Association of Georgia will convene in Augusta for its annual session, April 18.

**Sanatorium Sold.**—The Halcyon Sanatorium, Atlanta, has been sold by Dr. Joses B. S. Holmes to W. B. Hamby for $46,000.

**Acquitted.**—Dr. W. B. Vaughn, physician of Barton County, has been acquitted of involuntary manslaughter in the case of a convict named Virgil Liddelle.

**New Rule at Grady Hospital.**—The board of trustees of Grady Hospital, Atlanta, has passed a resolution abolishing all money payments to internes of the hospital.

**Election.**—The Medical Society of Floyd County at its annual meeting held in Rome, elected the following officers: President, Dr. William J. Shaw, Rome; vice-president, Dr. J. C. Huell, and secretary-treasurer, Dr. W. L. Funkhouser.

**Personal.**—Dr. Everett Daniel, Moultrie, has been elected delegate to the state medical association by the Colquitt County Medical Association.——Dr. George H. Noble, Atlanta, has received from the Louisiana Purchase Exposition a commemorative diploma and medal.

**Physician Fined.**—Dr. Samuel G. Scoven, Macon, was fined $100, March 10, for contempt of court, the contempt lying in the fact that the physician had signed a certificate that a defendant in the City Court was ill and unable to attend court when in fact he had left the state.

**Ask for Pasteur Institute.**—A circular has been mailed by Dr. A. G. Fort, Lumpkin, to each member of the general assembly of Georgia and to all members of the Medical Association of Georgia, seeking to interest them in the establishment of a branch of the Pasteur Institute for the treatment of hydrophobia. The circular sets forth that during 1905 five individuals were bitten by mad dogs in Stewart County alone. Dr. Fort hopes that a bill may be passed covering this important matter.

**Commencement Exercises.**—The graduating exercises of the Medical Department of the University of Georgia, Augusta, were held April 2, when a class of 30 was graduated.——The fifty-first annual commencement exercises of the Atlanta College of Physicians and Surgeons were held April 2, when a class of 56 received diplomas.——The first commencement exercises of the Atlanta School of Medicine were held April 3. A class of 21 was graduated. Dr. George H. Noble read his report and Hon. Hooper Alexander delivered the annual oration.

## ILLINOIS.

**Fined for Sale of Cocain.**—A. Monaco, a Clark Street druggist, has been fined $100 for selling cocain without a physician's prescription.

**State Society Meeting Deferred.**—The Illinois State Medical Society will meet at Springfield May 22 to 24 and not May 15 to 17, the date originally set for the meeting.

**Matinee for Tuberculosis Dispensary.**—The matinée musicale given April 5 for the benefit of the Chicago Tuberculosis Institute yielded almost $2,000 for the institution.

**Hospital Staff Resignations.**—The trustees of the Illinois Eastern Hospital for the Insane, Kankakee, on April 5 accepted the resignations of Drs. Beebe and Francis Walls.

**Petition Against Extension of Hospital.**—Owners of frontage on Michigan Avenue are circulating a petition protesting against the extension of St. Luke's Hospital to that street.

**Personal.**—Dr. Theodore A. Johnson, Xenia, was murderously assaulted by Henry Baker, a would-be pensioner, whose petition Dr. Johnson could not endorse.——Dr. Samuel M. Wylie, Paxton, sailed for Lisbon, April 7.

**Opposition to Hospital Ends.**—After a strife of three years the village board of Oak Park authorized Dr. John W. Tope and a Roman Catholic sisterhood to erect a $100,000 hospital building in Wisconsin Avenue south of Madison Street.

**Chicago Delegation for Lisbon.**—Among the Chicago physicians who have left for Lisbon to attend the International Medical Congress are Drs. Nicholas Senn, Daniel R. Brower, Lucy Waite, Harriet C. B. Alexander, Fenton B. Turck and J. D. Hammond.

**Interne Examinations.**—Of the 53 physicians who passed the civil-service examination for appointment as internes in the county hospitals and Cook County Institution, Dunning, 40 will be appointed to positions within the next nine months, the first appointments being made at Cook County Hospital in June.

### Chicago.

**Faculty Resignations.**—The following members of the faculty of the American College of Medicine and Surgery (Medical Department of Valparaiso University), have resigned: Dr. Henry S. Tucker, dean, head professor of gynecology; Dr. Ross C. Whitman, head professor of pathology; Dr. Victor J. Baccus, head professor of surgery; Dr. Henry G. Anthony, head professor of dermatology and genitourinary diseases; Dr. Charles H. Francis, head professor of ophthalmology; Dr. Henry F. Lewis, head professor of obstetrics; Dr. J. Rawson Pennington, professor of rectal diseases; Dr. George E. Baxter, professor of pediatrics; Dr. George J. Tobias, professor of hygiene and preventive medicine; Dr. J. McDonald Scott, assistant professor of surgery; Dr. Mary O. Porter, assistant professor of obstetrics; Dr. Marion B. McDonald, assistant professor of otology; Dr. Clare S. Learned, adjunct professor of therapeutics and materia medica; Dr. Arthur N. Mackey, instructor in dermatology, and Dr. Charles D. Hulbert, instructor in dermatology.

## MARYLAND.

**Physician Active in Legislature.**—Dr. Richard S. Hill's bill appropriating $90,000 for the construction of a great boulevard between Baltimore and Washington has passed the legislature and has received the governor's signature. Dr. Hill is a member of the House of Delegates from Prince George County. The road will be built under the direction of the state commission on highways.

### Baltimore.

**Smallpox.**—During the week ended April 7 three cases of smallpox were reported.

**Pneumonia and Pertussis.**—During March 149 deaths were reported from pneumonia. Whooping cough was prevalent.

**Funds for Hospital.**—Crusade Commandery, Knights Templar, have turned over $2,718.10 to the Hospital for Consumptives, the proceeds of a recent charity ball.

**Delay in Removal of University.**—The failure of the legislature to appropriate $50,000 to the Johns Hopkins University will delay indefinitely its removal to the new suburban site.

**Personal.**—Dr. William H. Welch has been elected an honorary member of the Gesellschaft der Aertze of Vienna, Austria.——Dr. J. Hall Pleasants is now in Naples and will spend the spring in London.

**State Appropriations.**—It is said that $160,000 more was appropriated by the legislature to institutions than at its last session. It has been particularly liberal to the hospitals, the University of Maryland Hospital alone receiving $60,000. For the State Tuberculosis Sanitarium, to be founded, $100,000 was appropriated for grounds and buildings and $15,000 a year for maintenance.

**Enlargement of Hospital.**—The $25,000 appropriated by the legislature to the Endowood Hospital for Consumptives, in the suburbs of Baltimore, will permit the erection of additional buildings, the laying out of the 75 acres of grounds and the establishment of a country sanitarium. The benefits also can be extended to the poor. Private charity is expected to add $50,00 or more to the aid given by the state.

**School Inspection.**—Dr. Bosley, health commissioner, attributes very beneficial results to the medical inspection of public schools in the diminution of deafness, diphtheria and consumption. Parents all over the city are having their children treated for adenoids and enlarged tonsils as soon as the evil is pointed out to them by the inspectors. Many children were also found suffering from bad nutrition, the result of improper or insufficient food, and the attention of the charitable organizations has been called to these cases, disease thus being forestalled in many instances.

### MASSACHUSETTS.

**Report on Anti-Vivisection Bill.**—In the legislature, March 26, the report of the committee on probate and chancery against the anti-vivsection bill was accepted without debate.

**District Society Meeting.**—At the meeting of the Middlesex East District Medical Society, held in Boston, March 14, the president appointed the following committee on the prevention and control of tuberculosis: Drs. George F. Dow, Reading; Richard Dutton, Wakefield; Francis E. Park, Stoneham; Ralph K. Stratton, Melrose; William H. Keleher, Woburn, and Harold A. Gale, Winchester.

**Hospital Alumni.**—The Massachusetts General Hospital Alumni Association was organized in Boston, March 24, 175 ex-internes being present. The following officers were elected: Dr. James C. White, Boston, president; Drs. Homer Gage, Worcester, Mass.; Thomas W. Huntington, San Francisco, and William S. Thayer, Baltimore, vice-presidents; and Dr. Fred A. Washburn, Boston, secretary.

**Medical Library Association Organized.**—The Springfield Medical Library Association, whose object is to promote the social and scientific interests of its members and to bring about a closer companionship among the medical men of Springfield, at its first regular meeting, March 9, elected Dr. Dudley Carleton, president; Dr. Edward M. Brown, vice-president; Dr. E. M. Cort, secretary and treasurer, and Dr. J. I. Butler, librarian.

**District Nurses for Public Schools.**—Since last December the experiment of having nurses of the District Nursing Association, under the supervision of the Boston board of health, visit the public schools, has been tried with much success by two nurses. Some treatments are given in the school buildings, while other patients are followed to their homes and cared for there. In this Boston is following the lead of New York City, where there have been such school nurses for the last three years.

**Personal.**—Dr. Simon J. Russell, city physician of Springfield, has resigned.——Dr. Charles H. Richardson, Pittsfield, and Dr. Franklin C. Downing, Lanesboro, returned from Europe, March 15.——Dr. Charles S. Holden has been chosen chairman, and Dr. George K. Roberts, secretary, of the Attleboro board of health.——Dr. George W. Galvin, for sixteen years surgeon and chief of the Emergency Hospital, Boston, has resigned that he may devote himself to private practice. ——Dr. Alfred H. McCormack, Northampton, sailed for Europe, March 14.——Dr. Paul Thorndike, Boston, has been visiting in Milwaukee.——Dr. Walter A. Harding has been unanimously elected president of the Everett Medical Society. ——Dr. John B. Hull has been elected physician of the Williamstown board of health.——City Physician George L. Black, Lawrence, has been removed, pending investigation of charges alleging conduct unbecoming a city official and physician.

**Hospital Reports.**—The annual report of the Massachusetts General Hospital for 1905 shows that 5,096 patients were treated in the wards, of whom 2,023 paid for their care in whole or in part. There were 21,874 outpatients treated and 5,459 accidents. The McLean Hospital for the Insane and the Convalescent Home in Waverly are maintained by the same board of trustees. The expense for the General Hospital was $238,457, of which $92,226 was paid by patients, the net deficit being $27,133. This was somewhat reduced by the income of the McLean Hospital, where, with a total expense of $236,703, there was an income of $4,404 additional. The total deficit for the three institutions for 1905 was $23,446, as against $21,109 in 1904 and $64,000 in 1903. Gifts amounting to $415,039 have been received during the year and have allowed the renovation of the Townsend and Bigelow wards and the construction of a new building for women at Waverly, with 36 beds.——At the Cambridge Relief Hospital 1,866 patients were cared for during the year, and 3,400 visits were subsequently made at their homes.

**Hospital News.**—Waltham Hospital has received a donation of $5,000 from Mrs. Caroline Foster Stickney for the establishment of a free bed to be known as the Joseph Stickney free bed.——The new main building in the New England Sanitarium in the Middlesex Fells, Melrose, was dedicated February 28.——It has been decided to apply the Lemont G. Burnham fund of more than $150,000 to the building of a new wing for the Boston City Hospital, to be known as the Lemont G. Burnham ward. The addition will accommodate 30 patients.——Frank A. and Henry Day, Newton, who recently gave the Day Memorial Home for Nurses to the Framingham Hospital, have agreed to provide the entire equipment of the home.——Only $1,030 remains to be subscribed to make up the $22,000 needed to clear up the debt of the Springfield Hospital.——Brockton Hospital has received a gift of $500 from George E. Keith to assist in paying the debt on the heating plant.——George Tracy Webster has announced that he will give $1,000 toward the erection of a suitable public hospital for Webster and Dudley in addition to the hospital site previously offered.——By the will of Charles H. Pew $5,000 is bequeathed to the Addison Gilbert Hospital, Gloucester.

**Must Label and Give Contents.**—The committee on public health of the Massachusetts legislature has reported in favor of the following bill:

Section 1. On every package, bottle or other receptacle holding any proprietary or patent medicine, or any proprietary or patent food preparation, which contains alcohol to an amount in excess of the amount shown to be necessary by the United States Pharmacopeia or the National Formulary as a solvent or preservative of the active constituents of the drugs contained therein, and to prevent deterioration by freezing or fermentation, shall be marked or inscribed a statement of the percentage of alcohol by volume contained therein; and the provisions of Section 19 of Chapter 75, Revised Laws, shall apply to the manner and form in which such statements shall be marked or inscribed.

Sec. 2. Every package, bottle or other receptable holding any proprietary or patent medicine or food preparation shall bear a label containing a statement of the quantity of any opium, morphin, heroin, cocain, alpha or beta eucain, or chloral hydrate contained therein, provided that the package contains more than two grains or opium, or more than one-quarter grain of morphin, or more than one-sixteenth grain of heroin, cocain, alpha or beta eucain, or more than eight grains of chloral hydrate, in one fluid ounce, or, if a solid preparation, in the avoirdupois ounce; and the provisions of Section 19, Chapter 75, Revised Laws, shall apply to the manner and form in which such statements shall be marked or inscribed.

Sec. 3. Whoever manufactures, sells or offers for sale any medicine or food preparation in violation of the provisions of the act shall be punished by a fine of not less than $5, nor more than $100.

Sec. 4. This act shall take effect on the first day of September in the year 1906.

### NEW YORK.

**Money for Cancer Laboratory.**—The State Cancer Laboratory, Buffalo, will receive this year $21,000 from the state, $3,000 of which will be devoted to meet the deficit of last year.

**The Mosquito Bill.**—A bill which seeks to exterminate the mosquito on Staten Island and has been reported favorably in the assembly, authorizes local boards of health to remove swamps which are breeding places for the insects.

**Much Scarlet Fever.**—Since October last there have been 411 cases of scarlet fever in Utica, and 123 were under observation March 28. The board of health claims that this large amount of scarlet fever is due to the failure to maintain quarantine.

**Thatcher Not Guilty.**—Dr. Edward P. Thatcher, Newark, charged with manslaughter in the first degree, in having caused the death of Grace Tyler, a Macedon girl, through the performance of a criminal operation, was found not guilty, March 28.

**Medical Club Election.**—The Utica Medical Club held its annual meeting March 15, at which the following officers were elected: President, Dr. Lewis B. Armsbry; vice-president, Dr. Andrew Sloan; secretary and treasurer, Dr. W. S. Nelson, and trustees, Drs. William J. Schuyler, Edwin Van D. Gazzam and Morris J. Davies.

**Health Officers Organized.**—Ontario County health officers met at Canandaigua recently and formed a society for organized effort on lines of health as regards the various villages and towns of the county. Dr. Orlando J. Hallenbeck, Canandaigua, was elected president; Dr. Duncan S. Allen, Seneca, vice-president, and Dr. Daniel A. Eiseline, Shortsville, secretary.

**February Vital Statistics.**—There were 11,351 deaths during February, or 44 less than the corresponding month of last year. The mortality increased from 382 deaths daily to 400. Infant mortality increased, due to the increase in measles and diphtheria. Consumption and cerebrospinal meningitis increased while pneumonia decreased. The mortality from measles was double that of last year. Pneumonia caused 15 per cent. of the total mortality, and 100 fewer deaths than in last February. The usual influenza epidemic was in progress, but few deaths were attributed to it.

**Society Changes Name.**—The Practitioners' Medical Society, Rochester, has changed its name to the Blackwell Medical Society, in honor of the first woman medical graduate. The following officers were elected: Honorary president, Dr. Sarah R. Adamson Dolley; president, Dr. Marion Craig Potter; vice-president, Dr. Evelyn Baldwin; secretary, Dr. Emily A. Cady Harris; treasurer, Dr. Helen De Witt Justin, and councilors, Drs. Sarah R. Adamson Dolley, Evelyn P. Ballantine and M. Louise Hurrell. The society has also revised its constitution to make it conform to the requirements of the American Medical Association.

**Personal.**—Dr. William Mabon, Albany, president of the state lunacy commission, is about to resign and take charge of the Manhattan State Hospital, Ward's Island, New York City. ——Dr. Richard L. Stoddard, Rochester, fell March 8, fracturing his right leg near the ankle.——Dr. Benjamin C. Wakely, Hornellsville, has been appointed coroner of Steuben County, vice Dr. Reuben F. Parkhill, Howard, deceased.——Dr. Carmi C. Thayer, physician of the Clifton Springs Sanatorium for 25 years, has resigned.——Dr. J. Nelson F. Elliott has been made chief medical inspector of schools of Syracuse.——Dr. Arthur W. Elting, Albany, was recently operated on at Johns Hopkins Hospital, Baltimore, for an infected finger.——Dr. Durrand R. Kinlock has been appointed a member of the surgical staff of the Utica General Hospital, vice Dr. M. O. Terry.

## New York City.

**Bail Forfeited.**—Bail of $1,500 given by "Dr." William Crutchy, charged with maintaining an establishment for illegal medical practice, was ordered forfeited March 24, as the defendant failed to appear.

**Acquitted.**—Dr. Benjamin S. Van Zile, Brooklyn, charged with manslaughter in the first degree, in having, as alleged, caused the death of Mrs. Celia Applebaum by criminal operation, was acquitted March 27.

**Under the Knife.**—Dr. J. M. Pilcher was operated on for appendicitis in Bellevue Hospital by his father and brother, March 25.——Dr. Moses I. Jackson, formerly borough coroner, was operated on March 27 for suppuration at the base of the brain.

**Delegates to Lisbon Conference.**—Prof. A. E. MacDonald was appointed to represent the New York University medical faculty at the International Medical Congress, and Dr. Charles W. Allen has been appointed delegate from the American Dermatological Association.

**Malignant and Non-Malignant Growths.**—On April 18 Dr. William S. Bainbridge wil give a clinical lecture on malignant and non-malignant growths in the outpatients' hall of the New York Skin and Cancer Hospital, at 4:15 p. m. The medical profession is invited to be present.

**Smallpox Aboard Ship.**—The steamship *Würzburg* of the North German Lloyd Line, which arrived on April 4, was detained at quarantine because of the discovery of a case of smallpox among the cabin passengers. Before the ship was allowed to dock 1,003 vaccinations were made.

**Acknowledge Donation.**—The trustees of the Sydenham Hospital, at a dinner April 2, presented Isaac Guggenheim a silver loving-cup in recognition of his recent gift of $250,000 to that institution. Mr. Guggenheim has promised to build a new home for the hospital when its patronage warrants the outlay.

**Field Hospital Planned.**—An important step for the benefit of the medical department of the National Guard of New York is the formation of the field hospital to be attached to headquarters. The hospital will be under command of Dr. William S. Terriberry, Twelfth Infantry, New York City, assisted by Drs. William E. Butler, Brooklyn, Twenty-third Infantry, and Thomas A. Neal, New York City, late Seventh Infantry.

**Contagious Diseases.**—For the week ended March 31, 1,941 cases of measles were reported, with 62 deaths; 387 cases of tuberculosis, with 198 deaths; 357 cases of diphtheria, with 52 deaths; 220 cases of scarlet fever, with 11 deaths; 28 cases of pertussis, with 4 deaths; 32 cases of cerebrospinal meningitis, with 19 deaths; 20 cases of typhoid fever, with 8 deaths; 166 cases of varicella, and 2 cases of smallpox, a total of 3,153 cases and 354 deaths.

**Examination for Internes.**—A competitive examination will be held at Lincoln Hospital, East One Hundred and Forty-first Street and Southern Boulevard, April 17 and 18, to fill four positions on the house staff. The written examination on anatomy, surgery, medicine, obstetrics and gynecology will be held April 17 at 2:30 p. m., and the oral and practical examination at the same hour on the following day. Application for permission to take this examination should be made by letter to Dr. Benjamin F. Tilton, secretary of the medical board, 121 East Thirty-eighth Street.

**Lower Death Rate.**—The report of the board of health for the first quarter of 1906 shows a lower death rate than for any previous corresponding period, though the death rate from measles and diphtheria is higher than ever before. This is accounted for by a remarkable decrease in the number of deaths from scarlet fever and cerebrospinal meningitis. In 1903 there were only about 10,000 cases of measles, scarlet fever, diphtheria and spinal meningitis, with a total death rate from all causes of 19.48 per 1,000. With 30,000 cases of the diseases just mentioned for the period there was a death rate of 19.47 per 1,000.

**Hospital Notes.**—At the annual meeting of the Metropolitan Hospital and Dispensary, March 1, it was announced that $5,000 had been added to the hospital funds in ten donations of $500 each.——The German Hospital Society of Brooklyn has received a donation of $10,000 from Peter Wyckoff, Williamsburg.——The new St. Francis Hospital on the Bronx was dedicated with formal ceremony by Archbishop Farley, March 1. The hospital has cost more than $800,000, and will have accommodations for about 600 patients.——The new Samaritan Hospital and Dispensary in Brooklyn was formally opened March 7. It has accommodations for 25 patients.

**Prevents Tuberculosis Clinic.**—A judgment has been granted restraining the health department from establishing a tuberculosis clinic in Henry Street, Brooklyn. The justice who granted this decree declared that the signs placed about the city were not effective in causing the people to obey the anti-spitting ordinance. Several doctors testified that the spitting of the patients going to and coming from the clinic would make the neighborhood unhealthful. Dr. Darlington testified that the streets and sidewalks about the clinic in Manhattan were free from sputum and that he had never seen a consumptive under treatment spit in the streets.

**Personal.**—Dr. Amelia W. Lines, Brooklyn, fell and dislocated her hip March 8, and is confined to her bed.——Dr. L. Bolton Bangs was the guest of honor at a dinner given by the Rochester Pathological Society, March 9, after which he gave an address on "Prostatectomy."——Dr. Francis J. Quinlan, president of the Catholic Society, has been selected to receive the Laetere medal given each year by the University of Notre Dame, South Bend, Ind., to the Catholic most distinguished in good works.——The home of Dr. Simon Baruch was deluged by water from a broken main, causing damage to the extent of several hundred dollars.——Dr. William M. Polk has been elected president of the Tennessee Society, recently organized in this city.——Dr. Carl Beck was the guest of honor at the dinner of the German Students' Society on March 24. A silver vase was presented to Dr. Beck, who was the originator of this society.

**Otisville Tuberculosis Sanatorium.**—The purchase of land for the city farm in Orange County has been completed. The altitude of this land is from 850 to 1,400 feet. The board of

estimate has given the health department $150,000 of city bonds for carrying on the work, $20,000 of which has been released for immediate use. With this sum the buildings now standing will be put into proper condition and a number of portable houses containing three rooms, each 10x10 feet, will be installed for immediate use. During the coming summer the number of consumptives received will be limited to 100, but during the warm weather the construction of substantial buildings will be pushed so that in a short time the work can be carried along on a much larger scale.

## OHIO.

**Epidemic Diseases.**—Diphtheria is epidemic in Millersburg, the public schools have been closed and public meetings interdicted.——Typhoid fever is reported to be epidemic in Barnerton.

**Not Guilty.**—Dr. A. C. White, Toledo, charged with practicing medicine without having registered, and prosecuted by the state medical board, was found "not guilty" by a jury in the police court, March 28.

**Hospital Association Formed.**—The Union Hospital Association of New Philadelphia and Canal Dover was formed at the latter place, March 21. A modern hospital will be built which will accommodate 15 patients.

**Sentenced to be Hanged.**—Dr. Oliver C. Haugh, accused of the murder of his father, mother and brother at their home, near Chambersburg, Nov. 4, 1905, was found guilty of murder in the first degree and sentenced to be hanged.

**Close Cheap Lodging Houses.**—The Cincinnati board of health, on the recommendation of the city health officer, has passed a resolution ordering the lodging houses on the river front to discontinue the five-cent rooms, which are reported to be unsanitary in the highest degree.

**Loses Damage Suit.**—In the suit of Gaylord Leicy, Mansfield, against Dr. W. Perry Bennett, Crestline, for $10,000 damages for alleged malpractice, which was filed more than a year ago, and under which after the death of Dr. Bennett his wife as administratrix was made defendant, the jury returned a verdict, March 13, for the defendant, vindicating the action of Dr. Bennett.

**Contract Practice.**—The regular meeting of the Cincinnati Academy of Medicine, March 26, was, by special arrangement, devoted to the discussion of contract practice. The members were almost a unit in condemning this system in medicine and resolutions were adopted which will practically exclude all physicians who are engaged in contract work from becoming or remaining members of the academy. The fiscal year of the academy was closed a week ago with probably the most satisfactory showing in its history. Fully half a hundred members were added to the roll and many papers showing laborious and painstaking research work, were read.

**Commend and Condemn.**—The following resolutions were passed at a recent meeting of the Cincinnati Academy of Medicine:

*Resolved*, That the Cincinnati Academy of Medicine commend our Senator Espy and others for work done in behalf of the medical profession of the State of Ohio on the Christian Science Amendment recently lost in our state senate. Be it further

*Resolved*, That the Cincinnati Academy of Medicine hereby declares Senators Howe, Schmidt and Williams of Cuyahoga County; Lauman, of Scioto County; Ross, of Washington County; Duvall, of Jefferson County; Hafner, Harper and Hunt, of Hamilton County; Pollock, of Stark County; and Mayor Tom L. Johnson, of Cleveland, who urged the passage of the Christian Science Amendment, as persons unworthy of confidence in matters concerning public health. And be it further

*Resolved*, That a copy of these resolutions be published in the medical journals of the state.

**State Medical Association.**—The annual meeting of the Ohio State Medical Association will be held at Canton, May 9, 10 and 11. The pediatric, dermatologic and ophthalmologic sections of the society hold their meetings on May 8 in the same place, and the Ohio State Board of Pension Examiners meets on May 10. The meeting halls, committee rooms and exhibit halls will be under one roof in the new municipal auditorium, recently erected by the citizens of Canton at a cost of $180,000, with an auditorium seating nearly 5,000 people. Canton is easily reached, as three trunk lines run through the city and three interurban trolley systems connect with various parts of the state. The oration on medicine will be delivered by Dr. John C. Hemmeter, Baltimore, on "Intestinal Autointoxication," and the oration on surgery will be given by Dr. Harvey C. Gaylord, Buffalo, N. Y., on "Further Research on Cancer." The committee of arrangements is making strenuous efforts for the entertainment of its guests that this may be not only a memorable meeting in a scientific way, but also from a social standpoint.

**Smoke Abatement.**—Under the able and energetic presidency of Dr. C. A. L. Reed, the Smoke Abatement League of Hamilton County has been formally launched. The plans of the committee are far-reaching. The league has been incorporated, and will be sustained by voluntary contribution, of which there is ample promise. It intends to secure, as far as possible, the voluntary co-operation of the proprietors of offensive stacks in abating the smoke nuisance; to secure the passage of laws, state and municipal, which, when enforced, will protect members of the league and the city at large against the damage now experienced from smoke; to receive confidential complaints about smoke from members; place the same in the hands of inspectors employed by the league; and whenever a case is made out, secure the abatement by amicable means, or, in the event of failure, secure the prosecution of offenders either by the city authorities or by the attorneys of the league; and to conduct scientific investigation concerning the actual prevalence of smoke; its influence on the property and health of the people; and the actual merits of the various means for the prevention of smoke.

**Personal.**—Dr. Harry J. March, Canton, will leave for Europe the latter part of this month.——Dr. Hiram B. Ormsby, Cleveland, slipped and fell, March 2, spraining his ankle.——Dr. James E. Torrence, Hamilton, was nearly asphyxiated by coal gas from a defective furnace, March 26.——Dr. Eugene B. Harrison, Napoleon, was operated on, March 26, in Toledo, for prostatic enlargement and vesical calculus.——Dr. John E. Stemler has resigned as receiving physician of the City Hospital, Cincinnati, to take effect May 1.——Dr. John C. Larkin, Hillsboro, has returned after postgraduate work in Chicago. ——Dr. Mary E. Tracy, Cincinnati, has been elected a district physician.——Dr. S. Munson Hart, Marietta, is seriously ill with pneumonia.——Dr. A. Per Lee Pease, Massillon, sailed for England, March 24.——Dr. Leon B. Santee, Marlboro, has been elected delegate from the Stark County Medical Society to the state medical society, and Dr. William C. Steele, New Berlin, alternate.——Dr. Furnam E. Perry, Jefferson, has been made president of the Ashtabula County Medical Society on account of the resignation of Dr. Addison W. Hopkins, and Dr. Fred D. Snyder, Ashtabula, has been elected vice-president. ——Barberton Medical Association has been organized with Dr. William A. Mansfield, president, and Dr. Harry S. Davidson, secretary and treasurer.

## PENNSYLVANIA.

### Philadelphia.

**Advisory Board of Anatomists Meet.**—The annual meeting of the advisory board of anatomists of the Wistar Institute of Anatomy and Biology will be held on April 16 and 17 at the institute.

**Reception to Dr. Sykes.**—On March 31 a farewell reception was tendered Dr. Henry Sykes, who for 15 years was superintendent of the Episcopal Hospital and was appointed to the position of medical superintendent of Blockley, April 1. Dr. Sykes was presented with a beautiful gold watch and chain by Dr. Thomas R. Neilson on behalf of the physicians, nurses and employés of the Episcopal Hospital.

**Bubonic Plague.**—It is reported by special telegram on April 9 that four cases of bubonic plague occurred among the crew of the British steamship *Burnsfield*, from Bombay. The patients were detained at Reedy Island quarantine station and the cases have been pronounced bubonic plague after investigation by officers of the United States Public Health and Marine-Hospital Service and an expert from the bacteriologic laboratory in Washington.

**Divide Chair of Anatomy.**—The chair of anatomy in Jefferson Medical College, made vacant by the death of Dr. William S. Forbes, has been divided. Dr. Edward Anthony Spitzka, New York City, a son of Dr. Edward C. Spitzka, a fellow of the College of Physicians and Surgeons in the City of New York, who has devoted much study to the anatomy of the brain, has been appointed professor of general anatomy, and Dr. John McClellan, a grandson of the founder of Jefferson Medical College, has been appointed professor of applied anatomy. Dr. McClellan established the Pennsylvania School of Anatomy in Philadelphia Hospital 26 years ago, and for many years has been professor of anatomy in the Academy of Fine Arts.

**Health Report.**—The total number of deaths reported for the week aggregated 625, the same as that reported for the previous week. The principal causes of death were: Typhoid fever, 31; measles, 7; cancer, 21; whooping cough, 6; diphtheria, 10; consumption, 96; paralysis, 19; heart disease, 58; acute respiratory disease, 120; enteritis, 18; Bright's disease,

42; appendicitis, 3; accidents, 22, and marasmus, 6. There were 320 cases of contagious disease reported, with 43 deaths, as compared with 365 cases and 45 deaths for the previous week. Typhoid fever is still prevalent, there being reported 230 cases, with 31 deaths, as compared with 225 cases and 33 deaths in the preceding week. Measles is still prevalent throughout the city and in epidemic form. The number of new cases reported for the week aggregated 519, as compared with 406 reported last week.

## SOUTH DAKOTA.

**Will Establish Hospital.**—Mrs. H. G. Peterson proposes to establish a hospital and sanitarium in Canton, and will agree to put in $3,000, provided the citizens of Canton will raise $1,000 additional.

**Personal.**—Dr. Anna Baker, Deadwood, has located in Denver. ——Dr. A. J. Buffalos, Alexandria, has moved to Mitchell. On March 23 Dr. Buffalos was so unfortunate as to slip on an icy pavement in Mitchell, injuring his hip and elbow.

**Insanity Discussed.**—At the annual meeting of the Southern South Dakota Medical Society, held at the State Hospital for the Insane, Yankton, March 27, the superintendents of the state hospitals at St. Peter, Minn., and Cherokee, Iowa, were present, and delivered addresses on the care of the insane.

**Society Meetings.**—At the annual meeting of the Black Hills Medical Association, held in Deadwood, the following officers were elected: Dr. C. W. Hargens, Hot Springs, president; Dr. G. Hayward Coburn, Deadwood, vice-president; Dr. Felix E. Ashcroft, Deadwood, secretary; Dr. Frank S. Howe, Deadwood, treasurer; Drs. G. Hayward Coburn, and Lyman F. Babcock, Deadwood, and Herman S. Judd, Lead, censors, and Dr. John W. Freeman, Lead, delegate to the state medical association. ——At the annual meeting of the Aberdeen District Medical Society the following officers were elected: Dr. John R. Thompson, Northville, president; Dr. Charles E. McCauley, Aberdeen, vice-president; Dr. E. Jay Clemons, Aberdeen, secretary, and Elmer O. Miller, Aberdeen, treasurer.

## VERMONT.

**New Hospital.**—Dr. Edward R. Lynch has purchased a house in Brattleboro which will be opened about April 15 as a private hospital, and will accommodate about 15 patients.

**Opposed Contract Service.**—All the physicians of Brattleboro have signed an agreement not to perform any medical or surgical services for the town or village of Brattleboro, or for any town or village adjacent thereto, or for any corporation or association, public or private, for a less price than the regular rates charged private individuals.

**Alumni Meet.**—The Connecticut Valley Alumni Association of the Medical Department of the University of Vermont held its second annual meeting in Springfield, Mass., March 22. The following officers were elected: President, Dr. Walter A. Smith; vice-president, Dr. Charles J. Downey, and secretary and treasurer, Dr. Vincent J. Irwin, all of Springfield.

**Elect Sanatorium Officers.**—The directors of the Vermont Sanatorium met at Proctor, February 20, and decided to have plans drawn for the new sanatorium to be erected at Pittsford, and elected the following officers: President, F. C. Partridge, Proctor; vice-president, F. C. Butterfield, Derby Line; treasurer, Miss Emily B. Proctor, Proctor; secretary, Dr. William N. Bryant, Ludlow, and executive committee, Dr. Charles S. Caverly, Rutland, and Messrs. D. D. Burditt, Pittsford; Olin Merrill, Enosburgh Falls, and Redfield Proctor, Jr., Proctor.

## GENERAL.

**Typhus Fever in Mexico.**—It is reported that the typhus fever situation in Mexico has greatly improved and will soon be completely under control.

**United States Naval Medical School Graduating Exercises.**—The graduating exercises of this institution were held March 31. Secretary Bonaparte of the Navy presented the diplomas to the members of the graduating class.

**Laryngologists to Meet.**—The twelfth annual meeting of the American Laryngological, Rhinological and Otological Society will be held under the presidency of Dr. James E. Logan, Kansas City, Mo., June 11-13, 1906. A number of prizes of $100 each for essays are offered to be competed for by members of the society. Further particulars may be obtained from Dr. Wendell C. Phillips, secretary, 40 West Forty-seventh Street, New York City.

**Hospital Internes Wanted.**—Two medical internes are wanted for the Government Hospital for the Insane, Washington, D. C., and for similar positions when vacancies occur, and an examination will be held by the United States Civil Service Commission at the various usual cities throughout the United States, June 6 and 7, 1906. This examination is open to all citizens aged 20 or over who are graduates of reputable medical colleges. Further particulars may be had from the commission at Washington or from the secretary of the board at any regular civil service examination point.

**Caution About an Agent.**—A Mr. S. Josephs, who was for some months in the employ of the American Medical Association in the capacity of a solicitor of subscriptions for THE JOURNAL and the "American Medical Directory," was dismissed from our employ, but he continues to solicit orders and to make collections in spite of not having any up-to-date letter of authorization. We have called attention to the fact that physicians should not pay money to any one claiming to represent the Association unless he presents an official letter of authority covering the time of making the solicitation.

**National Quarantine Bill Passed.**—The national quarantine bill was passed by the House April 3. The bill places the control of all quarantine stations, grounds and anchorages under the Secretary of the Treasury, and directs that he shall select suitable places for them and establish the same at such points on or near the seacoast of the United States and on the Mexican border, in order to prevent the introduction of yellow fever into the United States. The bill further gives the secretary the right to establish a quarantine station at the Dry Tortugas Islands and at such other points at or near seacoasts—not to exceed four in the aggregate—as he deems necessary.

## CANADA.

**Health of Toronto.**—Toronto was never so free from contagion as in March. There were but four patients in the smallpox hospital. Of diphtheria there were only 52 cases; scarlet fever, 26; typhoid fever, 10. Ninety infants died in Toronto in March out of a total of 380 deaths.

**Hospital News.**—In Winnipeg General Hospntal 348 patients were treated during the week ending March 31; 98 were treated in the outdoor department.——Efforts are being made in Winnipeg to collect $50,000 to establish a tuberculosis sanatorium. About $1,500 has been collected, and it is proposed to ask the different municipalities in Manitoba for $25,000. The balance will then be raised by private subscription.——During March 259 patients were admitted to the wards of Montreal General Hospital, and 238 were discharged. There were 19 deaths. The outdoor consultations numbered 4,318.——Mr. David Russell has donated $1,000 to the Home for Incurables, St. John, N. B.——The British Columbia government has included in its estimates this year an item of $5,000 for the establishment of a tuberculosis sanatorium for that province.——The Toronto Western Hospital has erected a new building containing 14 wards for private patients.

**The "Patent-Medicine" Question Before the Ontario Legislature.**—Mr. A. C. Pratt, one of the members of the Ontario legislature, has a bill before that body which seeks to regulate the manufacture and sale of "patent" and proprietary medicines. At present it does not appear that it will pass its second reading, as when it came up for that act the premier reminded the sponsor thereof that it was out of order; that any such measure must emanate from a government source and not from a private member. The bill seeks to have marked as poisons all preparations containing more than 6 per cent. of alcohol, or more than one-twentieth of 1 per cent. of morphin, heroin, cocain, or any quantity, however small, of a long list of drugs as arsenic, strychnin, prussic acid, chloral, etc. With an unanimity bordering on collusion the public press states that there is no demand for any such regulating legislation, considering it more in the light of "confiscating" legislation. The introduction of the subject into practical politics, however, has borne some fruit, as an acknowledgment is made by the press that there is no doubt that there are advertisements in the pages of newspapers which ought to be suppressed; and some papers call for a federal act to provide for frequent analysis from time to time of all "patent medicines," so that the people may know from an official and responsible source what these contain.

**Toronto University and Medical Education.**—A few months ago the government of Ontario appointed a royal commission to consider the best method of governing and administering the affairs of the University of Toronto. The chairman of this commission was Mr. J. W. Flavelle, who is also chairman of the board of trustees of the Toronto General Hospital. The chancellor of the university, Chief Justice Sir William Meredith and Prof. Goldwin Smith also acted on this commission.

Their report has just been handed to the government; and so far as it refers to medical matters it is of some interest. The commissioners recommend that the faculty of medicine be put on the same relation to the university as all the other faculties. It is proposed also that the president of the university be ex-officio a member of the faculty of medicine, so that as all appointments in all departments are recommended hereafter to be made on his recommendation, he will be in a better position to confer with those of the medical faculty best qualified to advise him. The subject of the medical education of women was also dealt with in the report, but that matter had already been considered and settled by the faculty of medicine and the senate of the university. It is understood that the Ontario Medical College for Women will shortly amalgamate with the medical faculty of the Toronto University; but, at any rate now, the aforesaid medical faculty is prepared to register women students and to make whatever arrangements are deemed necessary for their instruction. It may be mentioned in this connection also that it is recommended that a faculty of veterinary science be created in connection with the university.

## FOREIGN.

**Reduction in Number of Physicians Applying in Germany for License to Practice.**—Only 725 licenses (Approbationen) were granted in the fiscal year 1904-5 in the German empire. This is a falling off of 31 per cent. from the 1,057 registered in 1903-4.

**Koranyi Prize.**—On the occasion of his fiftieth professional anniversary, Prof. A. v. Koranyi of Budapest founded a prize, the income of nearly $2,000. It is to be awarded in May for the first time. The subject for competition is improved methods of treating tuberculosis.

**The International Medical Congress of 1909.**—It is reported that the Hungarian government authorized its delegates to the impending International Medical Congress, at Lisbon, to invite the next congress to convene at Budapest. The government has already appropriated $25,000 for the purpose, and the city has voted an equal sum.

**Geneva Conference.**—Early in 1903 the federal council invited the various governments to send delegates to co-operate in the revision of the Geneva convention adopted in 1864. It is now out of date. The outbreak of the Russo-Japanese War put an end to the project of revision for the time being. It has again been revived, and the date of June 11 appointed for the gathering of delegates from the various nations to confer in regard to the humanitarian aspect of war.

**Apotheosis of the Cystoscope.**—The recent death of Max Nitze, the inventor of the cystoscope, suggested an exposition of the cystoscope and all subjects connected therewith, as a worthy memorial to him. The exhibit was held at Berlin in the new Empress Friedrich House, where the exposition was opened with memorial addresses. The *British Medical Journal* in its last issue devotes much space to an article with colored plates, based on data learned with the cystoscope.

**Memorial to Nothnagel.**—A statue of the late Professor Nothnagel of Vienna is to be erected in the arcades of the university, and a fund is to be endowed for an annual souvenir address by some scientist of international fame on the anniversary of his birth or death, to be delivered in the clinic where Nothnagel worked for so many years. Those wishing to contribute to the fund are requested to send to Dr. N. v. Jagic, assistant at the first medical clinic, Allgemeines Hospital, Vienna IX, 3, Austria.

**Koch on Life in the Tropics.**—Before returning to Africa last month Robert Koch delivered an address on the medical aspect of colonization of German East Africa. He regards malaria as the greatest danger for the would-be colonist, although certain regions are free from it. He is convinced that, with quinin, it can be successfuly warded off. Relapsing fever is the next danger, but this can be avoided by keeping away from the shelters on the caravan routes and from the houses of the natives. Typhoid, diphtheria, smallpox, leprosy, ankylostomiasis and sunstroke are all rare. Dysentery plays but a subordinate rôle, and the prospects of keeping sleeping sickness away are good. There is no tuberculosis. The climatic conditions as the ground rises inland are like those of southern Europe. The sanitary measures hitherto undertaken have proved successful and others will follow in time.

**Abuse and Homage for Professor Neisser.**—Professor Neisser of Breslau, discoverer of the gonococcus, and a leader in syphilology, president of the Society for Prophylaxis of Venereal Disease, medical privy councilor, etc., recently came to Stettin to deliver by request an address on "Marriage and Venereal Disease." He is of Jewish descent, and acquired some notoriety a few years ago on account of alleged inoculation of a patient with syphilis. When he appeared to deliver his address a crowd began to hoot and denounce him, so that he was obliged to retire. The medical profession of the town called a special meeting, where resolutions were adopted couched in the most complimentary terms, deploring the occurrence. Neisser has not been home very long from his year of research in Java on inoculation of monkeys with syphilis. The complimentary testimonial from the Stettin physicians was signed by more than ninety names.

**Damages for Slander of a Physician.**—The wife of a Berlin merchant was recently fined 600 marks, about $150, for defaming a physician. He had been called to her child, who was suffering from a middle ear affection, with whooping cough prevalent in the neighborhood. The mother summoned soon after an ear specialist and a leading pediatrist in consultation, and they ordered a few further measures to supplement those commenced by the attending physician. The mother afterward went around telling her friends that the consultants were disgusted at the treatment the child had been receiving and remarked that it was incredible how a physician could have made such a mistaken diagnosis and given such orders. The physician brought suit for slander and proved that the consultants had said nothing of the kind, and that his treatment had been according to the rules of the art in every respect. The judge censured the defendant as guilty of serious defamation without any basis, and imposed the highest penalty in his power.

**International Association of the Medical Press.**—The *Berliner Klin. Wochft.* for March 26 gives the details of the approaching congress of the International Association of the Medical Press. It convenes at Lisbon two days before the International Medical Congress opens its doors. This is the second congress of the association, and for the first time a year-book will be distributed among the members. It contains the names and date of founding, with other particulars, in respect to all the medical journals that belong to the association. The subjects appointed for discussion are "Protection of Literary Property in the Medical Press"; the "Medical and Pharmaceutical Gratuitous Journal"; the organization of a permanent central bureau for the international congresses, and the right of the members of the International Association of the Medical Press to be accepted as members of the international medical congresses without further payment of dues. The present president of the association is Professor Cortezo of Madrid, one of the editors of the *Siglo Medico.* The general secretary of the association is Dr. Blondel of Paris, who is at the head of the Bureau of Scientific Information at the Sorbonne, 103 boulevard Haussmann, Paris.

---

# *Correspondence*

### A Better Treatment of Pneumonia Wanted—The "Galbraith Quinin-Iron Method."

OMAHA, NEB., April 3, 1906.

*To the Editor:*—Recently, after having a chill and feeling badly I wondered, should my case develop into a pneumonia, whether my physician would give me the best chance to live by employing the modern treatment indicated in your recent editorial. It has been disappointing not to have learned more about the "Galbraith quinin-iron treatment" of pneumonia from those in a position to try and better their statistics. The death rate from acute lobar pneumonia is high, and hospital statistics during many years show no great improvement in its treatment. Every one acquainted with Dr. Galbraith knows him as an experienced and exceedingly practical "all-around" man; his diagnosis in a case or series of cases of pneumonia can be as absolutely relied on as that of any physician, wherever located. It is this knowledge of the man that leads me to have faith in what he writes about quinin and iron in the treatment of pneumonia, and the belief that by this treatment better results may be obtained.

The symptomatic treatment of pneumonia, mostly recommended by text-book authorities and hospital physicians, whose mortality statistics in this disease average between 20 and 40 per cent., needs a substitute. What is wanted is the lowering of the death rate, and if a method of treatment will bring about this much-desired end, let those in a position to give the Galbraith treatment a test in a series of cases do so.

It is immaterial if years ago a writer in Ziemssen's Encyclopedia did recommend quinin in enormous doses in the treatment of pneumonia. What if Drs. A. or B. have after some fashion tried it? When I was a student quinin in moderate doses was a treatment of pneumonia, the lancet was in disrepute; drugs were little relied on as specifics.

Alonzo Clark told us that "if the good Lord would forgive him he would never again pack the chest of a pneumonia patient with ice," he having lost eight consecutive cases in Bellevue Hospital by this practice. Several years after graduation I observed the practice in Vienna of applying cold cloths to the chest and giving a little red wine internally. For more than 20 years since that time I have noted that some physicians use ice locally; others, blisters, the flaxseed poultice, the Clark oil-silk jacket, etc. Internally have been administered alcohol, the coal-tar products, strychnin, digitalis, salicylate of soda and creosotal. All have kept the mortality at about the time-honored standard of from 10 to 40 per cent., in accordance with the age of the patient, his natural resistance and the character of the prevalent severity of the pneumonia.

Galbraith tells the indications for the size of the initial and subsequent doses of quinin, and insists likewise on the systematic administration of the tincture of chlorid of iron in conjunction with the quinin.

I hope the profession will give Galbraith's treatment a fair trial and report results. J. E. SUMMERS, JR.

### Text-Books in Korean.

PHILADELPHIA, April 2, 1906.

*To the Editor:*—Into how many separate languages "Gray's Anatomy" has been translated perhaps only its publishers can tell us. Another tongue has just been added to the list, owing to the painstaking labors of Dr. O. R. Avison of Seoul, Korea, formerly of the teaching force of the Toronto Medical College. The volume he so produced he has made available to ambitious young Koreans by causing a certain number of copies to be mimeographed. He has done the same with a number of other elementary text-books; but the result is, of course, far inferior to printing and the supply adequate for only a very limited demand.

The young men for whose especial use this work is being done are under instruction in a number of hospitals in different cities in Korea. Left to themselves they would have been still following the barbarous methods in vogue among practitioners of the native school, compounding prescriptions of a dozen or two ingredients, unsavory and incompatible, prohibiting nourishment, while administering drastic potions, searing regions tender with inflammation, plunging the hot needle into brain or abdomen an unknown depth, and aggravating diseased joint conditions until fetid suppuration destroys the limb. The substitution of aseptic surgical methods and of a rational therapeusis for such procedures is the beneficent work of mission hospitals; and the training of a generation of enlightened physicians is one of the inseparable accompaniments. Problems are many in connection with such an educational need, among them that of text-books.

The outlook before a young graduate in medicine in Korea renders more than usually delicate the question of the measures that may wisely be adopted in his education. The scale of fees reasonably to be counted on from most of his patients is not such as to warrant a luxurious style of life. Yet sleeping and sitting on the floor, a diet of rice, pickled cabbage, red pepper sauce and dried fish, and dressing in the flowing garb of the Korean, accord little, on the other hand, with surgical or even with personal cleanliness. To train a young man abroad is practically to train him to such a disgust with his own people that he becomes denationalized; to train him among them calls for the creation of much new material.

The members of the committee who are interesting themselves in this problem stand ready to receive and to forward contributions toward a fund for the publication of medical text-books in Korean. It seems certainly a fair proposition to ask the profession in America to provide the books from which these aspirants across the water may learn the correct principles of the great art of healing.

H. Augustus Wilson, M.D., 1611 Spruce Street, Philadelphia.
W. W. Keen, M.D., 1729 Chestnut Street, Philadelphia.
Robert W. Lovett, M.D., 234 Marlborough Street, Boston.
H. P. Loomis, M.D., 58 East Thirty-fourth Street, New York.

### Palatable Castor Oil.

CHICAGO, March 15, 1906.

*To the Editor:*—Under a trade-mark name, a pleasant and palatable preparation of castor oil is being distributed among physicians. A small vial containing a sample of a sweetened, tasteless, palatable and non-acrid (I am not aware that castor oil possesses acrid properties) castor oil is sent to the practitioner, and this, in a few weeks, is followed by a circular calling attention to the sample and expatiating on the merits of this elegant and improved pharmaceutical preparation. According to this circular, this preparation is composed of nearly pure castor oil, consisting of 99.99 per cent. of absolute castor oil, the remaining .01 per cent. being aromatic corrigents and sweetening adjuvants. Even sepsis appears to be a factor in ordinary castor oil, as this special preparation is rendered "aseptic." Castor oil is and always will be *par excellence*, the laxative of choice of the laity. The physician is often called on to prescribe castor oil, and patients invariably ask him to have it made as nearly tasteless as possible. I have for years prescribed a sweet, pleasant and palatable form of castor oil, one which answers all the requirements of an elegant pharmaceutical preparation. It consists of nearly pure castor oil, being about 99.98 per cent. castor oil, the remaining .02 per cent consisting of a sweetening principle and a carminative adjuvant. The formula is as follows:

| | | |
|---|---|---|
| R. Saccharini | gr. ii | 12 |
| Olei menthæ piperitæ | gtt. v | 30 |
| Alcoholis q. s. M. fiat sol. et adde: | | |
| Olei ricini | ℥viii | 240 |

Sig.: Dose same as castor oil.

JOHN RITTER, M.D., PH.G.

### "Ambulatory" Smallpox.

SOMERVILLE, MASS., March 16, 1906.

*To the Editor:*—I recently had a case of smallpox and the history of its inception may be of interest to some readers of THE JOURNAL.

The case presents no features of especial clinical significance, but the wide range of the victim's travels while in the active stages of the disease, and the possibility of transmission in many localities lead me to report what is mainly the patient's story of the early days of his illness.

The patient is a young man of 20, a member of a musical organization which left Boston, February 4, for a trip through the southern states. He was not in good physical condition when he left, as he had had a busy season and was thoroughly tired out. On February 21, at Meridian, Miss., he had an attack of chills, nausea and headache. The next day he felt very feverish and had severe backache. The symptoms became more intense during the following days, though he continued to take part in the nightly concerts given by the club at Selma, Ala., Maplesville, Columbus and Tuscaloosa. On February 25 the company went to Delaware Ohio. The following morning, February 26, he noticed a rash on his forehead and wrists and went to a physician of the town. This was the first time he had sought medical advice, as he thought he had eaten something which had "poisoned" him. The doctor gave him some pills and a lotion and told him that his self-conceived diagnosis was doubtless correct and that he would be all right in a day or two. That night he fainted on the stage and was carried to his hotel.

The rash continued to spread, and on February 27, at Galion, Ohio, he says that he "was a sight," and that "the eruption looked like little blisters." He played at Warren, Ohio, on February 28, and on March 1 at Franklin, Pa. At the latter place he consulted a second physician, by whom he states he was examined for an hour or more, and who told him that the eruption resembled that of smallpox. A variety of lotions,

dusting powder and ointments were prescribed, and he was assured that the eruption would "go away in a few days." March 2, at Erie, Pa., the patient describes himself as hardly able to stand and as being unable to sleep or eat. On March 3 he played with the company at Silver Creek, N. Y., when he "excited considerable comment by his appearance, both on the stage and afterward when he met the audience socially."

The club arrived in Buffalo on March 4, and the young man paid a visit to Niagara Falls in the afternoon. He states that other occupants of the coach in which he made the trip showed a rather pardonable reluctance to sit next to him. In the evening the proprietor of the hotel at Buffalo came to him with the objection that other guests were complaining of his appearance and asked him to consult the "house doctor." The latter was called and promptly said: "Young man, you would better get home as soon as possible." The patient left Buffalo at 10 o'clock that night and arrived in Somerville on the afternoon of March 5.

The family physician was called and at once made a positive diagnosis of smallpox, and the patient was removed to the hospital twelve days after the initial symptoms were noted, and with pustules at the height of their development.

The pustulation was discrete but very closely distributed over face and limbs. It was more widely scattered on the trunk.

The case has progressed to practical recovery without incident of clinical interest. The patient claims to have been vaccinated in childhood, but no evidence of successful inoculation is to be noted. C. CLARKE TOWLE.

### A New Radium Danger.

NEW YORK, April 7, 1906.

*To the Editor:*—I notice an editorial reference in to-day's issue to an explosion of a radium tube in Germany. The liability to this accident was pointed out by me nearly two years ago in the *Medical Record*, June 20, 1904, as follows: "The second cause for the perforation of a glass tube is the increase of electric potential within the tube. Just as soon as this becomes sufficiently high the electricity sparks through. . . . To guard against this accident I would propose what appears to me a very simple and effective remedy, namely, sealing a small piece of platinum wire into the glass tube. It need only project a very short distance into the tube, and externally may be flush with the glass."

Radium in an aluminum tume is, of course, not liable to this accident, but to another quite as serious. If an alumninum tube is inserted into a growth, the bodily fluids will corrode it, and to my knowledge a number of tubes have been injured in this way, the corrosive going entirely through the aluminum and permitting the fluids to mix with and to injure the radium. I have protected my own aluminum tube by having it thinly coated with vulcanized rubber; this was done for me by a dental friend. On testing the tube before and after it was found that its effectiveness was impaired about 20 per cent., but this is better than taking the chance of entirely ruining the specimen. It is needless to say that the rubber employed should not contain any metallic oxids, as their presence would still further interfere with the egress of the rays.

Some of the pure radium bromid is now furnished in little cells with a mica face. This should not be applied directly to a moist surface. I have protected mine by covering the face of the cell with a collodion varnish and further wrapped the cell in a rubber-dam, such as dentists use.

H. G. PIFFARD.

**Mercury Sound for Dilating Esophagus.**—Adam of Hamburg uses a very flexible, non-fenestrated sound, filled with mercury, for dilating a stricture of the esophagus. The weight of the sound carries it down and it automatically works its way past strictures that arrest all other sounds, even those of smaller caliber. In one cancer case he has been able to keep the passage open for seven months by introducing this sound every second day. It is easy to control the position of the sound by radioscopy.—*Münch. med. Wochft.*

## Association News

### THE BOSTON SESSION.

**Some Details of the Arrangements for the Annual Session Next June.**

The Committee of Arrangements is actively engaged in perfecting the arrangements for the fifty-seventh annual session of the American Medical Association to be held in Boston June 5-8. Their announcement of the hotels with prices appeared in THE JOURNAL last week. The headquarters of the various sections were named.

#### GUIDE BOOK.

A very practical feature of the arrangements is an elaborate guide book, which will enable the visiting physician to reach any point of interest and to understand all the historical scenes in Boston and vicinity. A good map is to be included, and special attention will be given to medical and surgical points of interest.

#### THE RECEPTIONS.

On one evening there will be the usual reception to the President of the Association, which is the chief social event of the week. At Harvard University's new medical school buildings there are to be afternoon teas from 4 to 7 o'clock on two or three afternoons, with music in the quadrangle and on the terraces. This will be principally for the ladies who are visiting, with the possibility of the physicians dropping in at the close of their afternoon programs. Special concerts and theater parties are being planned and a reception by the City of Boston in the Public Library.

#### CLINICS.

The advantages of Boston as a medical and surgical center are not to be neglected. Clinics will be held at a number of hospitals, and arrangements will be made whereby visitors may make the rounds of the hospitals or visit certain ones in the most convenient way. Some clinics are to be held in connection with some of the work of the section programs. All hospitals will provide clinical exhibits of some sort, and members who wish a change from the section programs will be able to find clinical work on any day.

Among the halls which are to be used for the section meeting places are the Y. M. C. A. Hall, Huntington Hall, the New Old South Church, Horticultural Hall, Chickering Hall, Jordan Hall and the buildings of Tufts and Harvard medical schools. The headquarters is to be at Mechanics Hall, where will be the registration and the scientific exhibit and the commercial exhibit. The House of Delegates is to meet in the Medical Library of Harvard Medical School.

#### EXCURSIONS.

A rate of one fare plus $1 for the round trip is to be in effect over a large part of the United States, and tickets will be sold from June 1 to 6, good to return leaving Boston up to June 11, with an extension possible to June 30. Passengers from Pacific Coast points may have return limit extended to August 31.

Among the excursions to be enjoyed in the vicinity of Boston are such historical places as Plymouth, Lexington and Concord and to points on the seashore. After the session visits may be made to the lakes of Maine and New Hampshire, the mountains of Vermont and New York, the St. Lawrence River, the Thousand Islands, the Great Lakes, Niagara Falls, etc.

MISSOURI VALLEY SPECIAL.—Arrangements have been perfected for a superb special train to Boston over the Grand

Trunk, via Niagara Falls, Toronto, Montreal, Thousand Islands, with a daylight ride down the St. Lawrence River, returning by rail. This train will run special through from Chicago, and will be made up of Pullman palace sleepers, dining-cars, buffet-library and observation cars. For reservations and itinerary address Dr. Charles Wood Fassett, St. Joseph, Mo.

LAKE SHORE SPECIAL.—The Lake Shore Railway will run a special train, a counterpart of the "Twentieth Century Limited," consisting of observation compartment car, sleeping-cars, library-car, dining-cars, on fast schedule, leaving Chicago at 10:30 a. m., Sunday, June 3, arriving at Boston, Monday, June 4, at 2 p. m. Stopover of ten days at Niagara Falls may be secured for side trips to Toronto, Thousand Islands and St. Lawrence River if desired. Write W. J. Lynch, Passenger Traffic Manager, Chicago, for reservations or any additional information.

GUESTS OF HONOR.

Prof. A. Duehrssen of Berlin writes that he will take part in the symposium on the "Duty of the Profession to Womankind," which is arranged in the Section on Hygiene and Sanitary Science. Professor Duehrssen will present a paper on the "Guarantee of Safety in the Marriage Contract." His fame as one of the leading gynecologists of the world is well known, and his contributions to gynecologic literature are numerous and varied. He has been preaching the advantages of vaginal Cesarean section since 1896. His private gynecologic clinic at Berlin was opened in 1892, but for years before and since he has been assistant obstetrician and instructor of midwives at the Charité. He is now in his forty-fifth year.

Max Joseph of Berlin is at the head of what has been called "the best private skin clinic in the world." In 1897 he founded the *Dermatologische Centralblatt*, and has always been its editor. In his early life he worked as assistant in the Berlin Institute of Physiology, then at the zoological station near Naples, and then made a special study of leprosy in Norway for his work on "Visceral Lepra." His manual on cutaneous and veneral diseases has passed through several editions, as also his atlas of the histopathology of the skin. He will be another of the guests of the Section on Hygiene and Sanitary Science.

## NEW MEMBERS.

List of new members of the American Medical Association for the month of March, 1906:

### ALABAMA.

Acton, W. H., Alabama City.
Britt, W. S., Eufaula.
Carlisle, S. O., Dothan.
Cocke, W. T., Hargrove.
Dickinson, N. P., Lafayette.
Dean, T. J., Union Springs.
Dryer, T. E., Huntsville.
Franklin, C. M., Union Springs.
Grady, Z. T., Lafayette.
Hargrove, R. H., Sycamore.
Harris, D. B., Munford.
Hawkins, J. P., Ragland.
Harris, E. C., Ragland.
Hixon, F. P., Perote.
Huey, G. W., Hartford.
Jackson, C. B., Dora.
McClendon, Joe, Dadeville.
McEachern, C. P., Banks.
Moody, E. F., Dothan.
Morris, W. E., Georgiana.
Nolen, A. J., New Site.
Prather, W. B., Seale.
Paschal, John, Hatchechubbee.
Ralls, A. W., Gadsden.
Rand, Edgar, Huntsville.
Reynolds, Gibson, Montgomery.
Stewart, B. C., Opp.
Terry, J. E., Red Level.
Turnipseed, D. C., Union Springs.
Underwood, N. T., Russellville.
Watson, J. C., Georgiana.
Williamson, G. W., Hartford.

### ARIZONA.

Brannen, D. J., Flagstaff.
Ralph, R. T., Poland.
Shine, F. E., Bisbee.
Wiley, C. B., Camp Verde.

### ARKANSAS.

Clemmer, J. L., Springtown.
Cowden, S. H., Morrilton.
Cunning, I. H., Knobel.
Dibrell, J. L., Little Rock.
Hughes, G. H., Gravette.
Luck, B. D., Pine Bluff.
Moore, A. L., Fayetteville.
Rice, C. A., Gentry.
Robinson, C. E., Clarksville.
Thompson, A. G., Pine Bluff.
Winkler, E. H., De Witt.

### CALIFORNIA.

Abbott, E. K., Monterey.
Clark, Jonas, Gilroy.
Carter, P. B., Guadalupe.
Cluness, W. R., Jr., San Francisco.
De Lappe, F. R., Modesto.
Garcelon, Harris, Los Angeles.
Griffith, T. R., Riverside.
Huff, L. J., Los Angeles.
McAulay, Martin, Newman.
Mosher, C. D., Palo Alto.
Parish, H. L., Calistoga.
Stapler, D. A., San Francisco.

### COLORADO.

Edwards, E. G., La Junta.
Follansbee, W. F., Paonia.
Hughes, J. G., Greeley.
Leavitt, B. C., Denver.
MacGregor, J. M., Denver.
Magruder, A. C., Colorado Springs.

### CONNECTICUT.

Bevan, C. A., West Haven.
Graves, F. G., Waterbury.
Henkle, E. A., New London.
Plumstead, M. W., East Haddam.
Stoll, H. F., Hartford.
Wason, D. B., Bridgeport.

### DELAWARE.

Ellis, W. W., Delaware City.
Frame, J. K., Millsboro.
France, J. L., Wilmington.
Springer, F. L., Newport.

### DISTRICT OF COLUMBIA.

Reeve, J. N., Washington.
Wilson, A. A., Washington.
Wood, G. W., Washington.

### FLORIDA.

Rawlings, J. E., Daytona.

### GEORGIA.

Almond, Chas. B., Winder.
Ayers, Clarence L., Carnesville.
Brown, L. R., Sharon.
Campbell, J. L., Atlanta.
Coleman, E. T., Graymont.
Collier, T. J., Atlanta.
Deadwyler, O. L., Carlton.
Daughtry, Wm. H., Jr., Augusta.
Derry, H. P., Macon.
Dewis, C., Young Harris.
Goodwyn, H. J. Roopville.
Kemp, W. M., Marietta.
Lively, M. M., Statesboro.
Mickle, C. M., Texas.
Mills, G. W., Calhoun.
Reynolds, H. V., Marietta.
Rushing, W. E., Daffin.
Shaw, W. J., Rome.
Sims, W. C., Richland.
Turner, G. H., Rico.

### ILLINOIS.

Allen, H. S., New Boston.
Allin, F. W., Chicago.
Bacon, J. H., Peoria.
Beard, L. A., Polo.
Berger, G. F., Chicago.
Buford, C. G., Chicago.
Buss, F. J., Chicago.
Cook, E. A., Upper Alton.
Conlon, A. A., Chicago.
Cretors, F. G., Paris.
Champion, Joseph Van Meter, Mansfield.
Daum, E. F., Chicago.
Duncan, E. M., Marshall.
Eisendrath, J. L., Chicago.
Finch, J. H., Chamoaign.
Galloway, George Chicago.
Gibson, O. N., Eldorado.
Graham, Ralph, Riggsville.
Greene, E. B., Chicago.
Griffith, C., Rushnell.
Groth, W. F., Chicago.
Haller, Joseph, Lanark.
Hoover, M. O., Chicago.
Konzelman, A., Chicago.
Kramp, A. F., Chicago.
Lane, Francis, Chicago.
Little, H. M., East St. Louis.
Ludwig, H. M., Chicago.
McCormick, F. C., Normal.
Moore, M. T., Chicago.
Motter, T. I., Chicago.
Noakes, T. V., La Prairie.
Olsen, Marie A., Chicago.
Palmer, T. J., Maywood.
Peck, W. H., Chicago.
Read, C. F., Geneva.
Reitman, B. L., Chicago.
Rischar, Eduard, Chicago.
Roberts, R. R., Augusta.
Sloey, James, Lebanon.
Slogn, Valborg, Chicago.
Smith, M. H., Colona Station.
Sogsworth, John, Wilmette.
Stewart, A. F., Chicago.
Train, John A., Chicago.
Trueblood, R. R., Lawrenceville.
Vanatta, F. M., Dunning.
Wright, Emily, Rock Island.
Yantis, D. E., Foosland.

### INDIANA.

Bland, Curtis, Greensburg.
Boyd, C. E., West Baden.
Boyd, C. L., Vincennes.
Brent, I. N., Jamestown.
Casper, John, Jasper.
Crowder, J. R., Sullivan.
Current, O. E., Farmland.
Dancer, Chas. W., Stroh.
Gross, W. O., Ft. Wayne.
Hobbs, H. C., Salem.
Hoover, J. G., Boonville.
Hunt, Tightman, Plainfield.
James, N. A., St. Meinrad.
Kelsey, Clarence, Evansville.
Kelso, U. G., Dubois.
Kendall, C. W., Pine Village.
Kern, C. B., Lafayette.
Knapp, Victor, Ferdinand.
MacDonald, J. A., Indianapolis.
Mercer, D. J., Poe.
Miller, B. E., Albion.
Mullikin, H. M., Terre Haute.
Norris, S. G., Anderson.
Osgood, H. G., Gosport.
Porter, J. B., Elkhart.
Shobe, M. A., Ligonier.
Smith, J. F., Brazil.
Teaford, S. F., Paoli.
Teal, G. A., Kendallville.
Wade, F. C., Lima.

### IOWA.

Baron, H. S., Pella.
Bassett, L. A., Boone.
Chaffee, O. L., Waverly.
Choate, Cora W., Marshalltown.
Crosby, I. F., Stuart.
Dunlavy, H. F., Bedford.
Elmer, A. W., Davenport.
Farrens, E. T., Clarinda.
Fellows, A. R., Vinton.
Fuqua, W. M., Pella.
Glynn, C. E., Davenport.
Harrison, J. W., Guthrie Center.
Houlihan, T. J., Ida Grove.
Knox, J. M., Cedar Rapids.
Marston, C. L., Mason City.
Matthey, Carl, Davenport.
Maxwell, J. R., Keokuk.
McCarthy, W., Moines.
Merrill, N., Marshalltown.
Philpott, A. F., Ft. Madison.
Rodgers, L. A., Oskaloosa.
Smith, F. J., Milford.
Stotler, W. P., Shenandoah.
Vlessen, H. H., Pella.
Vollmer, Karl, Davenport.
Walliker, W. M., Clinton.

### KANSAS.

Caton, Chas., Concordia.
Cave, J. W., Wichita.
Colladay, S. M., Hutchinson.
Crawford, J. S., Salina.
Ekblad, J. W., Scandia.
Gulick, A. C., Goodland.
Guy, S. J., Winfield.
Haggman, C. V., Scandia.
Holcomb, C. M., Winfield.
Hollingsworth, T. J., So. Haven.
Jacobus, L. A., Winfield.
Judd, C. E., Topeka.
Litsinger, G. H., Riley.
May, F. B., Hunnewell.
McLemore, B. A., Ft. Scott.
McShea, Royal, Chapman.
Moyer, D. J., Junction City.
Perry, M. L., Parsons.
Pinkston, A. A., Independence.
Porter, M. C., Clay Center.
Ralls, C. T., Winfield.
Rea, J. A., Wellington.
Reynolds, S. E., Clay Center.
Richards, G. W., Kansas City.
Scales, H. L., Mt. Hope.
Shelly, S. T., Mulvane.
Sidlinger, S. H., Hutchinson.
Snyder, H. T., Winfield.
Williams, E. M., So. Haven.
Winterbotham, J. H., Salina.
Witmer, P. B., Abilene.

### KENTUCKY.

Boothe, R. C., Praise.
Breidenthal, G. B., Louisville.
Burnside, Wm., Barboursville.
Curry, P., Wesley.
Farabough, J. A., Clinton.
Grant, J. M., Petersburg.
Grimes, L. A., Concord.
Martin, G. E., Myers.
Mason, J. B., London.
Meador, J. W., Custer.
McMorries, E. B., Clinton.
Murdock, John, Auenstoke.
Nettelrott, Alexander, Louisville.
Nuttall, J. P., Jr., New Castle.
Scott, J. W., Lexington.
Thomas, G. C., Oakton.
Wadlington, J. B., Princeton.
Wallace, C. K., Frankfort.
Williams, W. H., Franklin.

### LOUISIANA.

Armstrong, W. G., New Orleans.
Capdau, J. E., New Orleans.
Crawford, L. B., New Orleans.
Hatch, E. S., New Orleans.
Hume, Joseph, New Orleans.
Marcour, R. O., New Orleans.
McAnn, D. J., Atkins.
Newman, W. T., Independence.
Perrilliat, L., New Orleans.
Scott, S. W., Shaw.
Souchon, Marion, New Orleans.
Watson, F. B., New Orleans.
Wunderlich, Wm., New Orleans.

### MARYLAND.

Buckner, C. T., Baltimore.
Caspari, Wm., Baltimore.
Gross, Harry, Baltimore.
Hall, Thomas B., Mt. Winans.
Palmer, R. V., Palmers.
Rosenthal, L. J., Baltimore.
Wilson, L. N., Baltimore.

### MASSACHUSETTS.

Ahearne, C. A., Lynn.
Allen, Freeman, Boston.
Arkin, Louis, Roxbury.
Atwater, J. B., Westfield.
Averell, C. W., North Reading.
Baldwin, H. T., Chestnut Hill.
Bancroft, G. A., Natick.
Barre, J. A., Fall River.
Barrett, M. F., Brockton.
Beebe, T. C., Jr., Boston.
Boutelle, H. C., Danvers.
Brousseau, W. G., Cambridge.
Burke, W. H., Cambridge.
Burnett, F. H., Brockton.
Celce, F. F., Holyoke.
Chandler, N. F., Medford.
Coon, G. B., East Walpole.
Curran, S. F., Dorchester.
Fair, J. F., E. Cambridge.
Fernald, G. G., Waverley.
Ferrin, W. W., Haverhill.
Field, J. B., Lowell.
Floyd, Cleaveland, Boston.
French, J. M., Milford.
Goddu, L. A. O., Beverly.
Harkins, J. F., Worcester.
Hayes, W. L., Cambridge.
Healy, T. R., Newburyport.
Higgins, J. H. Marstons Mills.
Hill, G. H., Worcester.
Hoadley, A. H., Northampton.
Howell, W. E., Boston.
Ingalls, G. H., Jamaica Plain.
Kenney, W. C., Tewksbury.
Lanoie, J. E., Fall River.
Larrabee, H. M., Tewksbury.
Leahy, T. J., Cambridge.
Leary, W. C., Springfield.
Lemaire, W. W., Lynn.
Leonard, H. P., Boston.
MacQuaid, J. S., Worcester.
Mahoney, F. X., Boston.
Meek, Edith R., Boston.
Myles, L. T., Cambridge.
Nielson, E. B., Boston.
Nye, H. R., Leominster.
Painter, C. F., Boston.
Parker, E. L., Worcester.
Pickard, I. L., Concord Junction.
Rolfe, W. A., Boston.
Sargent, G. B., Lawrence.
Simmons, C. C., Boston.
Simmons, Hannah C., Worcester.
Smith, H. H., Boston.
Stedman, George, Boston.
Stowe, I. E., Medford.
Storey, T. A., Boston.
Streeter, J. F., Springfield.
Stredder, C. W., Marshfield Hills.
Sullivan, J. L., Boston.
Tobey, G. L., Jr., Boston.
Von Groll, M. C., Boston.
Walton, W. J., Dorchester.
Webber, A. P., New Bedford.
West, E. G., Boston.
White, C. J., Boston.
Worthington, A. M., Dedham.

### MICHIGAN.

Baker, A. J., Grand Rapids.
Browne, J. E., Howell.
Doherty, V. C., Grand Marais.
Drake, H., Pontiac.
Elliott, Edwin, Chesaning.
Ellison, Gayfree, Muskegon.
Emmert, H. C., Detroit.
Gorenflo, A. H., Detroit.
Huber, G. G., Gmouth.
Huizinga, J. G., Grand Rapids.
Lyon, L. W., Detroit.
McGough, A. L., Detroit.
Milligan, E. T., Detroit.
O'Donovan, D., Detroit.
Pratt, G. O., Detroit.
Reinberg, J. G., McBain.
Risley, E. H., Battle Creek.
Seaborn, R. A., Detroit.
Slocum, Geo., Ann Arbor.
Swift, E. R., Coleman.
Utter, L. J., Detroit.
Vander Veen, Arend, Grand Haven.
Van der Velpin, A., Detroit.

### MINNESOTA.

Alexander, F. H., Barnesville.
Ayres, G. T., Ely.
Bigelow, C. E., Dodge Center.
Edwards, J. M., Mankato.
Ferree, G. P., Paynesville.
Gibbon, L. L., Lowry.
Hacking, F. H., Granite Falls.
Heimark, J. H., Fertile.
Lewis, C. F., Austin.
Lowe, Thomas, Pipestone.
Manson, F. M., Worthington.
Mayo, W. W., Rochester.
Newhart, Horace, Minneapolis.
Parker, O. W., Ely.
Putney, G. E., Paynesville.
Wang, A. M., Minneapolis.

### MISSISSIPPI.

Armstrong, J. C., Water Valley.
Banks, E. J., Abbeville.
Baykin, W. H., State Line.
Birchett, J. A., Vicksburg.
Bragg, E. R., Biloxi.
Everett, A. G., Friars Point.
Edwards, I., Morton.
Jiggitts, J. R., Canton.
Lamkin, L. H., Natchez.
McBryde, W. W., Brooksville.
McLaurin, A. G., Brandon.
Pevey, W. H., Forest.
Ratliff, R. F., Lucedale.
Sayle, B. B., Coffeeville.
Trotter, A. G., Winona.
Tucker, H. S., Ellisville.
Young, A. A., Oxford.

### MISSOURI.

Ameiss, F. C., St. Louis.
Barnes, G. W., Springfield.
Becker, W. H., St. Louis.
Brown, O. H., St. Louis.
Byler, W. F., Koeltztown.
Curdy, R. F., Kansas City.
Eades, M. H., New Hampton.
Farnsworth, D. B., Springfield.
Fewel, R. B., Montrose.
Fulton, C. E., Springfield.
Hall, O. B., Warrensburg.
Hirschl, W. T., St. Louis.
Holt, E. E., St. Louis.
Hornback, E. T., Hannibal.
Knabb, Enoch, Springfield.
Lamson, R. C., Neosho.
Loewenstein, H. M., St. Louis.
Long, F. L., DeSoto.
Mann, F. P., St. Louis.
Martin, W. T., Albany.
McComb, J. A., Lebanon.
Meredith, A. L., Wooldridge.
Menees, G. W., Clinton.
Myer, J. S., St. Louis.
Perkins, J. M., Lebanon.
Pinckard, J. A., Lebanon.
Pritchett, P. L., Lebanon.
Stone, A. B., Lamar.
Todd, D. C., St. Louis.
Terry, N. F., Springfield.
Wills, R. L., Neosho.
Wilson, E. H. G., St. Louis.
White, W. L., Chillicothe.

### MONTANA.

Boyle, C. B., Bozeman.
Wallin, C. C., White Sulphur Springs.

### NEBRASKA.

Walker, J. G., Mt. Clare.

### NEVADA.

Sullivan, J. J., Virginia City.

### NEW HAMPSHIRE.

Fiske, G. V., Northwood Ridge.
French, L. M., Manchester.
Graves, R. J., Concord.
Hanson, C. W., Northwood Ridge.

### NEW JERSEY.

Allers, Henry, Harrison.
Bleick, W. D., Newark.
Conover, E. E., Hasbrouck Heights.
Farr, J. C., Jr., Hoboken.
Gamson, E., Bayonne.
Hanan, J. T., Montclair.
Mitchell, Winthrop, East Orange.
Sickenberger, F. E., Carlstadt.
Tuers, G. E., Paterson.
Van Riper, A. W., Passaic.
Waite, G. N., Newark.
Ward, Gertrude, Bloomfield.

### NEW MEXICO.

Cunningham, J. M., Las Vegas.
Hall, W. H., Hagerman.
Kinsinger, J. W., Roswell.

### NEW YORK.

Alderton, H. A., Brooklyn.
Austin, O. L., Tuckahoe.
Benedict, A. L., Buffalo.
Bogart, J. B., Brooklyn.
Burnham, M. P., Ray Brook.
Butler, G. R., Brooklyn.
Cilley, A. H., New York.
Cochran, H. L., Brooklyn.
Collins, J. J., Brooklyn.
Connelly, Daniel, Kingston.
Elsner, H. L., Syracuse.
Ely, W. S., Rochester.
Ewers, W. V., Rochester.
Fisher, E. D., New York.
Fleming, J. W., Brooklyn.
Gardner, Miriam, Clifton Springs.
Grant, J. H., Buffalo.
Hendrickson, S., Brooklyn.
Herman, C. F., Brooklyn.
Humpstone, O. P., Brooklyn.
Hutchinson, W. M., Brooklyn.
Jacobi, Abraham, New York.
Jennings, J. E., Brooklyn.
Jennings, C. S. R., Elmira.
Jewett, C. S., Buffalo.
Klepe, E. J., Buffalo.
Knight, F. H., Brooklyn.
Lamadrid, J. J., Brooklyn.
Lee, J. A., Brooklyn.
Little, G. F., Brooklyn.
Longmore, J. A., Brooklyn.
Loop, R. G., Elmira.
Love, C. R., Brooklyn.
Matson, Nathaniel, Brooklyn.
McCorkle, J. A., Brooklyn.
Mercer, Alfred, Syracuse.
Messinger, M. P., Oakfield.
Nichols, F. H., Jamestown.
Ohly, J. H., Brooklyn.
Otis, F. B., Brooklyn.
Park, Roswell, Buffalo.
Phillips, W. C., New York.
Price, G. M., Syracuse.
Read, H. N., Brooklyn.
Royce, R. S., Brooklyn.
Sherwood, W. A., Brooklyn.
Stedman, T. L., New York.
Taylor, J. R., Brooklyn.
Thompson, R. R., Kingston.
Truslow, Walter, Brooklyn.
Van Cott, J. M., Brooklyn.
Vickers, F. D., Canajoharie.
Vickers, H. W., Canajoharie.
Wey, H. D., Elmira.
Wight, J. S., Brooklyn.
Zellhoefer, Chas., Brooklyn.

### NORTH CAROLINA.

Bahnson, H. T., Winston-Salem.
Drew, G. F., Crary.
Fassett, B. W., Courtney.
Fish, H. G., Wheatland.
Maercklein, E. H., Forman.
Morris, A. St. C., Fargo.
Moore, W. B., Smith.
Smith, J. B., Pilot Mountain.
Rankin, J. A., Jamestown.

### OHIO.

Beebout, J. W., Dexter City.
Beery, J. E., Columbus.
Carlton, J. A., Columbus.
Crinnion, T. M., E. Toledo.
Davis, D. D., Omega.
Dunham, J. D., Columbus.
Edwards, J. F., Portsmouth.
Evans, L. F., W. Jefferson.
Fitch, M. D., Columbus.
Geissinger, H. W., Grove City.
Goodsell, E. J., Norwalk.
Graham, F., Lisbon.
Heidler, G. K., Cleveland.
Helms, F. G., Uhrichsville.
Henry, J. L., Athens.
Henry, Z. L., Amesville.
Hixon, G. W., Cambridge.
Hoover, W. M., Grove City.
Howard, J. M., Amesville.
Hughes, W. J., Moscow.
Johnston, H. J., Haskins.
Korner, A. H., Woodsfield.
Lee, H. T., Athens.
Matson, G. H., Columbus.
McCann, T. H., Scioto.
McCommon, W. A., E. Palestine.
Meitus, Jos., Cincinnati.
Mosier, D. D., Brice.
Murphy, J. A., Columbus.
Murphy, J. W., Eagle Mill.
Noble, Angus, Wellsville.
Owens, J. R., Wayland.
Parker, W. H., Wellston.
Price, Joseph, Columbus.
Richards, Nancy D., New Philadelphia.
Roberts, A. C., Morrow.
Roberts, D. M., New Richmond.
Rogers, G. W., Columbus.
Sipher, J. A., Norwalk.
Smith, R., Columbus.
Steele, J. H., Guysville.
Stevens, A. G., Black Fork.
Street, Harry, Litchfield.
Tarbell, R. C., Columbus.
Taylor, W. J., East Liverpool.
Templeton, A. M., Zanesville.
Tidd, E. T., Columbus.
Upson, H. S., Cleveland.
Walker, W. J., Farmer.

### OKLAHOMA.

Abel, W. N. T., Oklahoma City.
Beauchamp, F. D., Mangum.
Bilby, G. N., Alva.
Boyd, D. H., Anadarko.
Bradford, W. C., Shawnee.
Campbell, G. C., Anadarko.
Davis, E. F., Oklahoma City.
Dodson, W. O., Mangum.
Douglas, G. K., Shawnee.
Grayson, J. T., Shawnee.
Hazen, A. L., Newkirk.
Johnston, G. P., Lexington.
Kerley, W. W., Anadarko.
Linney, R. Z., Hopeton.
Lively, S. A., Wakita.
Lowther, R. D., Norman.
Mayberry, S. N., Enid.
McKenzie, W. H., Enid.
Melvin, J. L., Guthrie.
Orvis, E. J., Tonkawa.
Petty, C. S., Guthrie.
Phillips, G. H., Pawnee.
Stiles, N., Medford.
Weber, A. A., Perry.
Workman, J. M., Woodward.
Workman, R. A., Woodward.

### OREGON.

Ison, V. S., Baker City.
Slater, F. E., Salem.

### PENNSYLVANIA.

Ash, A. F., Duke Centre.
Bell, J. J., Erie.
Conner, Annie L., Philadelphia.
Cope, P. C., Braddock.
Davis, J. P., Oil City.
Doolittle, E. B., Hazleton.
Gray, G. B., Morris.
Hinchman, W. A., McKeesport.
Hawke, W. W., Philadelphia.
Kemp, A. D., Easton.
Rastatter, P. F., Erie.
Reed, J. H., Sharon.
Schmelter, J. W., Erie.
Sheridan, L. A., Wilkesbarre.
Stahlman, T. M., Harrisburg.
Weaver, A. P., Philadelphia.
Welbel, E. G., Erie.
Yeaney, G. B., Clearfield.

### RHODE ISLAND.

Boucher, R. P., Providence.
Bradshaw, A. B., Providence.
Brown, H. R., Providence.
Christie, J. S., River Point.
Green, H. R., Providence.
Griffin, C. H., Providence.
Richards, B. U., Pawtucket.
Wheaton, J. L., Jr., Pawtucket.

### SOUTH CAROLINA.

Allgood, J. E., Liberty.
Baker, A. E., Charleston.
Bolt, J. L., Pickens.
Bratton, R. A., Yorksville.
Frampton, James, Mt. Pleasant.
Goodlett, B. F., Travelers' Rest.
Hay, J. T., Jr., Baykin.
Napier, C. D., Blenheim.
Rogers, J. G., Page's Mill.
Walker, M. J., Yorkville.
Wickliffe, J. W., West Union.
Williams, J. F., Roebuck.

### SOUTH DAKOTA.

Peabody, P. D., Webster.

### TENNESSEE.

Bains, R. C., Wooldridge.
Branch, B. L., Collierville.
Campbell, J. F., Morristown.
Craig, J. R., Dversburg.
Doyle, A. H., Nolinville.
Ellis, J. J., Knoxville.
Farrington, P. McG., Memphis.
Frierson, W. G., Shelbyville.
Gillespie, J. R., Dayton.
Jones, L., Nashville.
Lackey, J. H., Ripley.
Little, R. M., Dresden.
Loring, B. F., McMinnville.
Williams, G. W., Chattanooga.
Woolner, A. B., Chattanooga.

### TEXAS.

Adkins, J. J., Refugio.
Ammons, H. R., Turnersville.
Baker, M. D., Waco.
Black, H. C., Waco.
Brown, J. B., McGregor.
Caldwell, J. A., McKinney.
Cantrell, Will, Wolfe City.
Callaway, G. McD., Anson.
Clark, H. T., Fanchon.
Cochrane, A. S., Mineola.
Covert, J. D., Fort Worth.
Craddock, S. W., Latch.
Dildy, J. E., Lampasas.
Du Val, J. W., Sulphur Springs.
Dye, T. C., Ratcliff.
Edwards, T. B., Cleburne.
English, E. W., Slayden.
Foster, C. C., Cornhill.
Grizzard, L. A., Abilene.
Gohlman, W. H., Houston.
Halsell, J. T., Laredo.
Harben, R. P., Richardson.
Herff, Ad., San Antonio.
Herff, J. B., San Antonio.
Herring, J. C., Cyclone.
Higgins, D. M., Gainsville.
Johnson, C. R., Gainesville.

Jones, J. T., Jonesboro.
Jones, O. L., Fort Worth.
Kelton, L. E., Corsicana.
Kight, J. R., Eola.
Kirkpatrick, S. B., Waco.
Lackey, W. C., Fort Worth.
Lareedo, G. W., Houston.
Lee, R. E., Honey Grove.
Mayes, J. A., Denison.
McDuff, J. M., Atlanta.
McLean, J. H., Fort Worth.
McLeod, R. H., Palestine.
McReynolds, G. S., Temple.
Mizell, Sewell, Kaufman.
Olive, Wm., Houston.
Overton, M. C., Lubbock.
Park, J. W., Kaufman.
Price, Don, Centerville.
Roberts, S. A., San Diego.
Robinson, J. E., Brownwood.
Robison, D. K., Itasca.
Ross, D. C., Keene.
Rucker, W. E., McKinney.
Sibley, A. J., Creedmoor.
Smith, Edgar, Mendoza.
Smith, D. M., Gustine.
Smith, F. M., Blue Ridge.
Sweatt, O. P., Waxanachie.
Townsen, J. B., Lampasas.
Terry, J. S., Ennis.
Thomas, L. B., Comanche.
Westbrook, W. J., Sive Springs.
Whitaker, A., Bigfoot.
Wilson, B. F., Marquez.
Woodson, J. M., Temple.
Worley, H. C., Sherman.
Young, F. E., San Antonio.

UTAH.

Hosmer, J. E., Provo.
Ray, C. N., Mount Pleasant.
Scott, H. S., Salt Lake City.

VERMONT.

Bonney, C. H., Ludlow.
Locke, C. W., Springfield.
Nichols, E. M., Barton.
Ross, C. B., West Rutland.
Wheeler, J. M., Burlington.

VIRGINIA.

Atkinson, M., Richmond.
Gover, R. W., Gore.
Hargrave, E. T., Norfolk.
Rogers, W. R., Bristol.
Shoemaker, L. W., Finney's Siding.
Wilson, N. G., South Norfolk.

WASHINGTON.

Downs, G. A., Spokane.
Harris, J. E., Seattle.
Mattice, M. B., Sedro-Woolley.
Stapp, M. R., Aberdeen.
Westphal, Hermann, Ft. Sincoe.

WEST VIRGINIA.

Arbuckle, J. A., Elkins.
Arbuckle, J. D., Cass.
Brown, W. A., Hambleton.
Cooper, F. S., Glatto.
Covert, O. F., Moundsville.
Le Sage, I. R., Huntington.
Leon, Moses, Mannington.
Perry, R. G., Jarvisville.
Ritter, W. E., Clay.
Smith, C. T., Tunnelton.
Tripett, J. F., Statler Run.
Wetzel, J. H., Ravenswood.
Wilson, E. A., Salem.

WISCONSIN.

Amsel, Joseph, Milwaukee.
Frost, C. H., Plainfield.
Iverson, M., Stoughton.
Perry, Dane, Prentice.
Post, C. C., Barron.
Sapper, O. L., Gresham.
Schmit, Louis, Milwaukee.
Seldon, W. B., Thorpe.
Tormey, T. W., Madison.
Wahl, H. S., Strafford.

## Marriages

ARTHUR D. BANGHAM, M.D., to Miss Ruth Ludlow, both of Albion, Mich., March 24.

FRANCIS M. ROSEBERRY, M.D., to Miss Marie Harnasch, both of Keokuk, Iowa, March 28.

NICHOLAS D. RICHARDSON, M.D., to Miss Elise Gregory of San Francisco, Cal., March 25.

ROBERT MILLIGAN COLEMAN, M.D., to Miss Elsie May Stoll, both of Lexington, Ky., April 4.

EDMUND M. STECKEL, M.D., to Miss Emma Druckenmiller, both of Allentown, Pa., March 27.

WALTER W. OVERFIELD, M.D., Forreston, Ill., to Miss Grace Knepper of Rockford, Ill., March 20.

MARVIN L. SMOOT, M.D., Spencer, N. C., to Miss Margaret Louise Giddens of Goldsboro, N. C., April 5.

ALVAH M. DAM, M.D., Brookline, Mass., to Mrs. Hannah A. Talbot of Stoughton, Mass., at Brookline, March 26.

HENRY LARNED KEITH SHAW, M.D., Albany, N. Y., to Miss Susanne Sturtevant Burrell of Little Falls, N. Y., March 29.

## Deaths

**Charles A. Snodgrass, M.D.** Medical Department of Washington University, St. Louis, 1903; health commissioner of that city since last November; a member of the American Medical Association and of the Mississippi Valley Medical Association, died April 6 from croupous pneumonia, at the City Hospital, St. Louis, after an illness of eight days, aged 38. Dr. Snodgrass received his preliminary education at the State University of Missouri and Chicago University. He was beginning a series of important reforms in the health department and devoted his entire time to the office. He realized that the importance of his office demanded full labor and gave it unflinchingly. He was an earnest student and a methodical worker, and the medical profession and the community lose a valued member in his untimely death.

**William Edgar Wirt, M.D.** University of Wooster, Medical Department, Cleveland, 1888, of Cleveland, Ohio; ex-president of the Cleveland Medical Society; professor of orthopedic surgery, Cleveland College of Physicians and Surgeons; orthopedic surgeon to Cleveland General and City hospitals; fellow of the American Academy of Medicine; a member of the Ohio State Medical Society and American Orthopedic Association, and chairman of the clinical and pathologic section of the Academy of Medicine of Cleveland; lieutenant of naval reserves during the Spanish-American War, died at Miami, Fla., March 19, from nephritis, after a long illness.

**James W. Smith, M.D.** Bellevue Hospital Medical College, New York City, 1882; for 15 years a member of the board of education of Paterson, N. J., and for 17 years a member of the board of managers of the State Asylum for the Insane, Morris Plains, and vice-president at the time of his death; chief surgeon of St. Joseph's Hospital, Paterson; assistant health officer of the city, died at his home in Paterson, March 29, from pleuro-pneumonia, after an illness of five days, aged 48.

**William J. Mahon, M.D.** Bellevue Hospital Medical College, New York City, 1897, of New York City; a member of the New York County Medical Society and of the Celtic Medical Society of New York; lecturer at the New York Polyclinic and surgeon to the Metropolitan Nose and Throat Hospital, died March 27 at the home of his parents in Hartford, Conn., from rheumatism of the heart, after an illness of seven weeks, aged 32.

**Solomon C. Martin, M.D.** Tulane University of Louisiana, Medical Department, New Orleans, 1866; professor of dermatology in Barnes Medical College, St. Louis, for 14 years; a Confederate veteran; editor of the *Medical Era* and associate editor of the *American Journal of Dermatology and Genito-urinary Diseases*, died at his home in St. Louis, March 27, from pneumonia, after an illness of three weeks, aged 68.

**Homer J. Short, M.D.** Medical College of Georgia, Augusta, 1888; for fifteen years a practitioner of Hot Springs, Ark.; twice a member of the school board and for two years its president, and a member of the city council for two terms, died at his old home, Buena Vista, Ga., March 22, from mental disease, after an illness of more than a year.

**Asa Emery Johnson, M.D.** University of the City of New York, 1850; a pioneer physician of Minnesota; founder and first president of the Minnesota Academy of Natural Sciences, Minneapolis; county physician of Hennepin County in 1858; for more than half a century a resident of Minneapolis, died at his home in that city, January 27, aged 80.

**George G. Wise, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1866; a member of the American Medical Association; attending physician to St. Luke's Episcopal Mission, died at his home in Philadelphia, March 28, from heart disease, after an illness of seven weeks.

**Jeremiah A. Cronin, M.D.** Bellevue Hospital Medical College, New York City, 1896; formerly house physician of Carney Hospital, South Boston; for several years assistant surgeon of the Ninth Infantry, M. V. M., died at the home of his parents in South Boston, April 2, after a lingering illness, aged 32.

**Charles S. Leonard, M.D.** Cleveland Medical College, 1856, formerly of Ravenna, Ohio, and for many years a member and secretary of the Portage County (Ohio) Medical Association, died at his home in St. Louis, Mich., March 26, after an invalidism of nine years, from cerebral hemorrhage, aged 79.

**Anton P. Nixdorf, M.D.** St. Louis Medical College, 1856; a surgeon during the Civil War; one of the oldest practitioners of Missouri; postmaster of Pleasant Farm, Mo., for many years, died at his home in that place, January 27, after an illness of one week, aged 74.

**Obadiah L. Saylor, M.D.** Jefferson Medical College, Philadelphia, 1853; once coroner of Schuylkill County, Pa.; a retired presiding elder of the Evangelical Church, died from dropsy at his home in Bethlehem, Pa., April 4, after an illness of two years, aged 72.

**Roscius Y. Downs, M.D.** College of Physicians and Surgeons in the City of New York, 1886; health officer of Derby, Conn., died at his home in Ansonia, Conn., April 1, from septicemia due to an operation wound, after an illness of only twenty-four hours, aged 48.

**Kent D. Waite, M.D.** Cleveland University of Medicine and Surgery, 1888, formerly professor of surgery and lecturer in anatomy at his alma mater, died at the Cleveland State Hospital from general paresis, March 29, after an illness of two years, aged 42.

**Charles H. Blaney, M.D.** Medical Department, University of Southern California, Los Angeles, 1904; assistant superintendent of Los Angeles County Hospital, died in that institution, March 30, from diabetes, after an illness of more than a year, aged 31.

**Michael P. O'Neill, M.D.** Medico-Chirurgical College, Philadelphia, 1900; a member of the American Medical Association; formerly resident physician at St. Agnes' Hospital, Philadelphia, died at his home in Philadelphia, April 3, from typhoid fever, aged 29.

**Job P. Boozer, M.D.** Medical College of the State of South Carolina, Charleston, 1854, of Clinton, S. C., for many years president of the Laurens County Medical Association, died suddenly, at the home of his daughter in Laurens, April 3, aged 73.

**Fletcher T. Seymour, M.D.** Department of Medicine of the University of Pennsylvania, Philadelphia, 1866, a beloved practitioner of Haywood County, Tenn., died at his home in Eurekaton, March 29, after a lingering illness, aged 70.

**Alonzo J. Weathered, M.D.** Vanderbilt University, Medical Department, Nashville, 1882, formerly an alderman of Waco, Texas, died suddenly from angina pectoris, at his office in Waco, March 28, aged 54.

**Daniel A. Dakin, M.D.** Rush Medical College, Chicago, 1870, a member and once president of the Wayne County Medical Society, died suddenly at his home in Detroit, April 2, from heart disease, aged 69.

**Wales G. Fike, M.D.** Medical College of the State of South Carolina, Charleston, 1899, of Union, S. C., died at Spartanburg, S. C., March 30, from heart disease, after an illness of ten weeks, aged 34.

**Ludy M. Henderson, M.D.** Medical College of Georgia, Augusta, 1867, a Confederate veteran, died at his home in Waterloo, S. C., March 24, after an illness of several months, aged 72.

**James Morris Crabb, M.D.** Rush Medical College, Chicago, 1904, recently of Ashton, S.D., died Nov. 23, 1905, in the Presbyterian Hospital, Chicago, from sacro-iliac tuberculosis, aged 37.

**Edwin G. Hawkes, M.D.** Jefferson Medical College, Philadelphia, 1892, a member of the American Medical Association, died at his home in Philadelphia, April 5, aged 40.

**Daniel G. R. Le Quesne, M.D.** Medical Department of Adelbert College of Western Reserve University, Cleveland, 1883, died at the Cleveland State Hospital, April 1.

**Edmond T. Baker, M.D.** Medical College of Virginia, Richmond, 1888, of Richmond, Va., died at the home of his father, Curl's Neck Farm, March 29, aged 38.

**James M. Black, M.D.** Kentucky School of Medicine, Louisville, 1888, died at his home in Knoxville, Tenn., April 5, from pneumonia, after a short illness.

**M. D. Shelton, M.D.** University of Nashville, Medical Department, 1869, died at his home in Midway, Ala., March 26, after a short illness.

**Alonzo G. Brush, M.D.** University of Wooster, Medical Department, Cleveland, 1881, died at his home in Fairfax, Vt., March 26, aged 87.

**Harry B. Orr, M.D.** Jefferson Medical College, Philadelphia, 1883, died at his home in Pittsburg, Pa., after a short illness, March 29, aged 49.

**Adolph W. Berle, M.D.** New York University, New York City, 1885, died at his home in New York City, March 26, aged 45.

### Deaths Abroad.

**H. V. Hoelder, M.D.** died at Stuttgart, March 11, aged 86. He occupied a prominent position in medical circles and was a pioneer in anthropologic research. His collection of skulls is renowned. It now becomes the property of the Stuttgart museum of natural history.

**P. Stolper, M.D.,** professor of legal medicine at Göttingen, succumbed to a stroke of apoplexy, March 13, while delivering a medical address. He was a frequent contributor to medical literature, discussing surgery for accidents, points in medical jurisprudence, etc.

**Phisalix, M.D.,** assistant to the chair of comparative pathology at the museum of natural history at Paris, France, died March 21, aged 50. His biologic researches have carried his name far.

---

**The Physician.**—Charles H. Lewis says that physics is the synonym of natural philosophy, and that, by the derivation of his name the physician is a natural philosopher, or scientist; but by the title of doctor he is also a teacher, and in his dual capacity the administering of remedies falls far short of measuring the field of his activities. His advice and counsel are often the most needed and most useful part of his service, and it is his duty to dispense knowledge as well as medicine.—*Journal Michigan State Medical Society.*

## *Miscellany*

### The German Circulars Warning Against Venereal Disease.

A special committee appointed by the German Society for Combating Venereal Diseases has prepared two circulars, one for men and the other for women and girls, each written in simple style. The work of the society has been previously described in these columns and its public meetings reported, as on page 1294, vol. xliv, 1905. The official title is the "Deutsche Gesellschaft zur Bekämpfung der Geschlechtskrankheiten." It is a national organization for sanitary prophylaxis, with local branches in more than twenty-two of the larger cities of Germany. The annual membership fee is about 75 cents (3 marks), and all classes of society are represented in it. The central office is in Berlin W. 9, Potsdamerstrasse 20. The society has already accomplished several notable reforms, among them the abolition of the discrimination against venereal diseases by the semi-official societies which insure against sickness. It has also secured more accommodations for venereal patients in the hospitals. The society issues a bulletin, the *Mitteilungen*, which is sent free to all the members. Independently of the society, the president, vice-president and secretary, Neisser, Lesser and Blaschko, issue a larger journal, the *Zeitschrift f. Bekämpfung der Geschlechtskrankheiten*, just entering its fifth volume. (Subscription is about $2—8 marks—a volume.) The managing board of the society consists of 49 persons, principally physicians, with lawyers, the mayors of Mannheim and Frankfurt, and some insurance and high government officials.

The circular addressed to men has been distributed by the hundreds of thousands throughout the universities, the workshops and other industrial establishments wherever German is spoken. The society has only recently issued a warning circular for women and girls which is now being distributed broadcast throughout the factories, etc. Copies of the circulars can be obtained free of charge from the central office. It will be noted that the circulars do not touch the moral side of the subject. The society replies to criticisms on this point that this aspect of prophylaxis is left to other hands.

We give literal translations of both circulars, not because they are models or worthy of imitation in style of presentation, but because they represent something actually done in the European campaign of venereal prophylaxis and because the agitation in this country is gaining such impetus.

THE GERMAN SOCIETY FOR COMBATING SEXUAL DISEASES.

CIRCULAR FOR MEN.

1. Abstinence in sexual intercourse, according to the unanimous verdict of physicians, is as a rule not injurious to health, notwithstanding a widespread notion to the contrary.

A temperate life and physical exercise in the open air (walking, gymnastics, swimming, rowing, skating, etc.,) can prevent the sexual desire from getting the upper hand.

2. The so-called venereal or sexual diseases are very prevalent among all classes of the population. The most important are gonorrhea and syphilis.

Gonorrhea begins a few days after the opportunity for contagion, with a discharge from the man's or woman's private parts, often with but also sometimes without pain, smarting or itching. It may not attract attention at all, especially in a woman, and it leads in many cases to various and sometimes very serious after-troubles. It may be still present and contagious long after the patient believes himself or herself to be entirely cured. They may then unknowingly give the disease to others. Very frequently in this way women become infected after marriage—many serious female diseases, the childlessness of many married couples, are the results of gonorrhea. The poison of the disease is liable to get into the eyes of the babe during birth, and if not properly treated, to make it blind.

Syphilis begins with a little break in the skin, a small lump or a sore, generally not until several weeks after the contagion, and leads in its further course to eruptions on the skin, sore throat etc. After these have all passed away, in the course of the next three or four years, sometimes even considerably later, the most various manifestations of the disease are liable to appear in any or every organ. Under appropriate treatment, as a rule, their course is mild and benign, but in many cases, especially when the treatment of the disease is neglected, extremely serious affections may result, with a train of distressing consequences. The disease is contagious for years, and may be transmitted to the offspring, even when the person affected seems to be apparently free from it.

3. The main source—direct or indirect—of the venereal diseases is intercourse with prostitutes, that is, with girls who give themselves up to several men for money. These girls usually take gonorrhea or syphilis or both very early, and then give them to others. Even medical inspection of prostitutes is not a certain protection—the young prostitutes in particular are especially dangerous. But also women who do not make themselves prostitutes, if they have the slightest habit of irregular sexual intercourse, are exposed to the danger of contagion, and are therefore liable to give the

disease to others. They may even be affected without any suspicion of it, and without any one's being able to detect any signs of disease on them.

4. Every sexual intercourse outside of married life may bring danger. This danger may be materially reduced by cleanliness, disinfecting washings, and by the use of special protecting measures, but they never entirely remove the danger.

5. An extraordinarily large number of venereal contagions occur under the influence of liquor; many are made worse by liquor drinking. In this way also liquor drinking causes much harm.

6. Syphilis can be taken also without sexual intercourse; contagion can occur from kissing. Also articles such as eating and drinking utensils, pipes and shaving brushes, used by strangers, should be avoided as much as possible, as they are liable to transmit the disease. A wet-nurse should never be engaged without a medical examination, and a child that has not been examined by a physician should never be given the breast.

7. Every wound or sore, inflammation or discharge on the private parts may be extremely contagious. Whoever has anything of the kind should, of course, refrain from sexual intercourse under all conditions and apply to a registered physician (not a quack) for a medical examination. By prompt recognition and appropriate medical treatment severe sufferings later may frequently be warded off. Nearly every case is completely curable, although not for years in some instances.

8. The man with gonorrhea or syphilis can not himself tell whether he is really cured or not. He must have himself examined by a physician again and again in the course of months, often years, so that the physician can follow the course of the disease and resume treatment again as it is needed.

No one should allow himself to be influenced by the advertisements of quacks and irregulars against the use of mercury in the treatment of syphilis. This treatment, according to the universal verdict of doctors, is necessary, extraordinarily effective, and harmless in the hands of a well-instructed physician. He who does not apply to a physician or who breaks off treatment or does not return for examination later has only himself to blame when he is again overtaken with manifestations of the disease, although sometimes not until many years later. By such neglect he not only injures himself, but frequently also other persons.

Before or after the apparent subsidence of a venereal disease, before a man has been declared by a physician to have got over the contagious stage, if he gives the disease to another person or exposes the latter to the danger of contagion he is liable to be sued in the civil and criminal courts and held for severe damages. The criminality is just as serious when the other party is a prostitute.

Any one who has had a gonorrhea or syphilis must beware especially of marrying, or, if he is already married, of resuming sexual relations until express permission has been obtained from his doctor. Above all, persons with a venereal disease must take especial care of the cleanliness of their bodies. The syphilitic especially must always bear in mind that, even without sexual contact, he is liable to give the disease to others by carelessness and infect innocent women and children.

9. Any one who has ever had a venereal disease must inform the physicians to whom he applies later of this fact. It may prove essentially important for the recognition and treatment of troubles later.

### CIRCULAR FOR WOMEN AND GIRLS.

This circular is addressed particularly to girls who become wage earners early and have no suitable persons to give them advice.

Among the most serious dangers which threaten these girls is the danger of sexual relations outside of marriage, to which they are often led by apparently harmless pleasures, such as dancing.

Intercourse with young men, in whose heedless and often absolutely dishonest promises the inexperienced girls put altogether too much trust, being led astray by advice of wanton female friends, and indulgence in intoxicating drinks—these are the allurements to which thousands of girls fall victims.

For girls sexual relations before marriage have a two-fold danger—the danger of getting in a family way, and the danger of sexual diseases.

The girl who is in a family way is hindered in her work. She frequently loses her position. She falls into disgrace and poverty. The poverty grows worse when a child comes into the world. The girl then frequently falls lower and lower until she becomes a common street-walker and thief.

Although the father is bound by law to support his child born out of marriage until it is 16, yet he often manages to sneak out of this duty or is too poor to attend to it.

Besides all this other burdens the expense of supporting the child then falls on the young mother, whose weakened health generally makes her unable to work much.

Men who seek sexual relations outside of wedlock generally have intercourse with several girls, especially also with prostitutes. The consequence of this is that nearly all of these men suffer or have suffered from some sexual disease. Any one who has a sexual disease can give it to others, even when he is apparently entirely healthy, and in many cases even when he considers himself entirely cured.

On account of the widespread prevalence of sexual diseases among men, every girl who has sexual intercourse even once with a man exposes herself to the danger of contagion. Girls who change their lovers often take some sexual disease almost invariably.

The two principal sexual diseases are syphilis and gonorrhea. The latter does far greater harm to the body of the woman than to that of the man. Gonorrhea works its way upward in the female into the interior of the body and causes in some of the lower internal organs severe inflammation and suppuration. Gonorrhea frequently makes the woman a chronic invalid, permanently unable to work. The poison of the disease is liable also to get into the eyes of the baby as it is born and make it blind.

Syphilis is a disease that lasts for years, which poisons the whole body and not seldom leads to the severest disfigurements and after-troubles. Stillborn children are a frequent consequence of syphilis.

Even when the person affected has no longer any manifestations of the disease it is liable to be transmitted to the offspring and induce in them serious forms of the disease.

Hence the following advice should be taken to heart:

1. Always be on your guard, so that a single hour under the influence of liquor may not rob you of your honor, your health, your money-making capacity and your life's happiness.

Close your ears to the persuasions of go-between women. These women profit by your ruin.

Be moderate in your indulgence in beer and other intoxicating liquors, or better still, avoid them altogether, especially when in company with men, and above all, at a dance.

2. If you have once yielded yourself to a man you must always be on the lookout for the injurious consequences that are liable to follow.

Examine your body for a long time afterward with the greatest care.

If signs of being in a family way develop, then go and state your case to some benevolent-minded woman. In all the larger cities there are societies which come to the aid of a girl in this condition, and mediate between her and her parents, as also with her seducer.

Smarting and itching in the private parts, especially a discharge not noticed before, suggest gonorrhea has been taken. Any sore or lump or ulceration on the private parts, any eruption or sore throat, suggests infection with syphilis.

On finding these signs, which often do not appear until after three or four weeks, go at once to some doctor (and always to a registered physician), a man or a woman doctor (never to a nature healer or quack). If these diseases are treated correctly from the first their course is generally mild. Then and then only, as a rule, can a complete cure be effected.

It is not enough, of course, merely to go and see the doctor. His directions, especially his instructions in regard to the most careful cleanliness, must be strictly followed in all points.

3. If you have taken a sexual disease then you must heed the following advice:

Until the doctor declares that you are entirely cured all further sexual relations are strictly forbidden. If you act contrary to this rule you lose all claim to sympathy, your behavior is criminal, and you are liable to severe penalties.

You must not get married until the physician has given his consent. Otherwise your husband may take the disease from you, and your children may be diseased.

Every girl should also try to make sure that her future husband does not suffer from a venereal disease.

At every later sickness, at every pregnancy, at every sickness of your child, you must tell the attending physician of your former sexual disease, in your own or your child's interests. The physician is bound by law to the most absolute secrecy; you can confide in him without reserve. Your telling of your former sexual disease will in many cases show him the way to treat the new trouble and the pregnancy.

4. If you have had sexual intercourse and yet have not got in a family way nor taken a sexual disease do not let yourself be lulled into security. The warnings of this notice are still binding.

5. Contagion with syphilis may occur without sexual relations. For instance, a healthy wet-nurse may take the disease from a syphilitic child, a healthy child from a syphilitic wet-nurse. Consequently before taking such a position both wet-nurse and child should be examined by a physician.

Syphilis may also be transmitted by a kiss and by the common use of eating and drinking utensils; gonorrhea by handkerchiefs, bandages, bed-linen, sponges, syringes and the like.

Consequently, be on your guard here also. Practice always the most painstaking cleanliness.

Heed well the advice which this circular gives you. Your happiness and your health lie in your own hand.

---

**Nursing Tuberculous Patients.**—Dr. Walter A. Griffin, in an article on this subject in the *Journal of the Outdoor Life*, calls attention to the fact that the nursing of tuberculosis patients is different in many ways from the nursing in other diseases. In any disease, he says, the patient has to be governed by the attendant, and the greatest tact is required. In tuberculosis the task is especially hard since in many cases the patient feels stronger than he really is, and if left to himself would frequently overtask his strength. From the nurse's standpoint there are three general classes of tuberculous patients, (1) those in the last stages, who are about to be relieved of their suffering; (2) those who, either at first or after having been under treatment, are taken acutely ill, but who have a fair show of recovery, and (3) ambulant (walking) cases. In the first class of patients attendance does not differ in great degree from that of any terminal illness. There is need of alleviating pain, quieting nervous fears, helping and consoling as only a good nurse can. It is not necessary to force the patient to be out in cold weather, to stuff him with food, or to chill him with cold baths unless he himself wishes it, as occasionally happens. For example, patients at times grow so used to fresh air that they will not be denied it, being made more uncomfortable if housed up. If the patient has begun on the treatment, it will at times awaken his suspicions if any laxity is shown. The sputa must be collected and destroyed with the greatest care when the patient is in this stage, and this duty usually falls to the nurse. The only rule to be insisted on is that the sputum must not become dried before it is destroyed by heat. In patients of the second class there is the comforting thought that recovery is not impossible; that the patient will without doubt get about again, and possibly be cured. It will probably be necessary to preach this gospel of hope many times to both patients and friends. Frequently the patient sees the bright side sooner than the rest, especially in these days when none speak of failure in the treatment of consump-

tion. But it is just as important that the courage of the rest of the family be sustained, so that they may reflect their hope to the patient, for there is nothing so discouraging as apprehension on the part of those near and dear. When a patient has so far recovered that he can be up and about, that is, when he becomes an ambulant case, the duties of the nurse are not so arduous. Unfortunately, at this time the patient frequently thinks that he can now dispense with a nurse altogether, and this is a mistake, since there are always times when a little watchful care will obviate the necessity of a return to bed.

**A Plea for the Neurasthenic.**—In an article on this subject in the *Montreal Medical Journal*, Dr. D. A. Shirres says that it is difficult and sometimes impossible to distinguish between neurasthenia and hysteria, as both conditions are due to cerebral exhaustion. In the typical neurasthenic, the marked insomnia, inability to concentrate the attention, defective memory, restlessness, fretfulness, irritability of temper, hypersensitiveness, discomforts about the head and neck, exaggeration of the reflexes, feeble pulse of low tension, and the constancy of the above symptoms, the length of time which the disease lasts as well as of the slow progress toward recovery, are diagnostic, as compared to hysteria, where there are marked psychical disturbance, and motor and sensory paralyses, the symptomatology being extremely variable in its nature and constancy. Dr. Shirres states that even physicians do not fully appreciate the magnitude of the disorder present in these cases. While gross diseases of the nervous system compel attention, he says the effects of ill health, suffering and incapacity produced by functional diseases are even more serious and far-reaching. In enumerating the symptoms of neurasthenia and differentiating it from hysteria *per se*, he states that the neurasthenic is likely to have hysterical symptoms. He declares that such a patient when obviously suffering from exhaustion should not be scolded or scoffed at, as the suffering is real. A physician should take time to listen patiently to all that the patient may wish to tell and should avoid the appearance of being in a hurry, as it is necessary that the patient should have implicit faith in his medical adviser. Treatment, he says, may be largely by suggestion, though it may be necessary to give tonics. Valerian and asafetida, he says, are useful, but bromids must be carefully used as they are liable to increase rather than to diminish the exhaustion present. Symptoms must be treated as they arise, for example, counter-irritation in local spasms, ice-bags, cold douches, etc., to relieve headache. Most remedies, he states, lose their efficacy after a time and new methods must be tried in order to exert the necessary psychic influence over the patient.

**Relation of the Thyroid to Ichthyosis.**—Moore and Warfield, in the *Journal of the Missouri State Medical Association*, report an interesting case of so-called fetal ichthyosis. The mother, an average-sized woman, with red hair and a freckled skin, entered the Bethesda Maternity Hospital in St. Louis, Aug. 10, 1905. She gave a history of a pregnancy with labor at the seventh month six years previously. At that time she was attended by a negro midwife, who would not allow her to see the child, which was dead, but buried it at once. During the night of August 9 (at seven months), the membranes ruptured and the following day she entered the hospital after a journey of 40 miles, during which the liquor amnii escaped freely. Pains began at 8 o'clock on that evening and the child was born at 7 p. m. the next day. The placenta came away spontaneously a few minutes later. It was intact and normal in appearance, and rather friable. Nothing abnormal was noted about the membranes or cord. The child, a male, cried vigorously at birth and presented a repulsive sight. It looked as though it had outgrown its skin and had burst through it. The entire surface of the body was covered by irregularly shaped plates of thickened epidermis, from 2 to 4 mm. thick, of an ivory color, separated by furrows of a dark red or purplish hue. The greatest thickening occurred about the head, producing marked ectropion of the upper eyelid and holding the mouth permanently open. The nose was rudimentary and there was little attempt at the formation of ears. The mucous membrane of the mouth and throat appeared normal; the glans penis was uncovered though the skin of the penis and that about the rectum was thickened. The hands and feet were distorted, the skin being drawn tightly over the bones; the fingers and toes were rudimentary. The child lived four days and during that time was fed by a dropper, suction being impossible. The skin was cold and clammy throughout, and the temperature was subnormal. All bodily functions were properly performed till death. At autopsy, eighteen hours after death, the portions of the skin which had been white were found to be dull-brownish in color, and the skin was as tough as leather. All the organs were congested. The thyroid and thymus were both small, and the other viscera showed no marked macroscopic changes. The microscopic changes in the thyroid were rather remarkable. These consisted in an enormous increase in the connective tissue of the gland, and an almost complete lack of colloid material and alveolar formation. Wherever it was apparent that alveoli probably existed, there were columnar cells lining the alveolus, and the center of the alveolus was occupied by granular material, degenerated cells, both cells with deeply staining nuclei, and those larger, with vesicular oval nuclei. At no place did it resemble the normal gland. There was marked atrophy of the thymus gland, with calcification of Hassall's corpuscles. The chief change in the skin was the enormous thickening in the horny layer. The authors state that this case supplies a deficiency in the literature in that there was a complete microscopic examination of the fetal adnexa, and they call attention to the fact that in only two of the recorded cases is the thyroid gland specially mentioned. They conclude by advising a careful study of the thyroid in cases of this disease which come to autopsy.

**Climatic Conditions of Salt Lake City.**—The committee of the Salt Lake County Medical Society, appointed for the purpose, has made a most interesting report on the climatic conditions of this region. The report starts with a review of the discovery and the colonization of the district, referring first to Father Silvester Veles Escalante, who, with eight of his companions, encamped at the mouth of the Provo, July 4, 1776. The report states that the great Salt Lake has much to do with the atmospheric conditions of that part of Utah, and that its influence extends for a radius of over 50 miles. Bathing in salt water is considered to have beneficial influences on a number of diseases, especially rheumatism. The range of temperature for that region is about 100 degrees. Changes in temperature are rarely abrupt. There is an average of 270 clear days in the year. The relative degree of humidity for a period of three years, from 1901 to 1903, inclusive, showed an average for Salt Lake City of 49.3. The uniform dryness of the atmosphere is one of its distinguishing features. During the summer months the humidity or moisture increases in the southern part of the state, but in Salt Lake City the relative degree of humidity is seldom more than two grains to the cubic foot. Hay-fever sufferers, asthmatics and sufferers from bronchitis are benefited and often cured by a stay in this climate. This is probably due, in part at least, the report states, to the lack of sudden changes in temperature. It takes several days for a change of 40 degrees to take place. There is no dew; the nights are as dry as the days. There is no rainy season, but periodically throughout the summer there are refreshing showers. Utah is said to be richly supplied with mineral springs which rival those of Europe in their therapeutic properties. The report concludes with an enumeration of the advantages of Salt Lake City as regards schools, hospitals, water supply, clubs, hotels, churches, etc.

**Obsolete Wisdom.**—An editorial in the *Medical Review of Reviews* says: "A very successful practitioner of our acquaintance was in the habit of assuring his office students that 'if they never gave anything which would harm their patients they would succeed in practice,' and therein was conveyed a fundamental truth which will never be out of date." The first

duty of the physician, therefore, according to the editor, is to do nothing at all, as thereby he will assuredly not give anything that will do harm. What a despicable lot of doctors there must be in that vicinity if this be the "fundamental" truth to be inculcated! Does the doctor tell his patients that? Are they willing to pay him for "services" on that basis? If so, they are more easily pleased than any we ever attended. The above is a type of the detracting, nasty slurs that are being hurled at us by quacks and others interested in lowering the regular profession in the eyes of the public. It is really too bad to hear it from one of ourselves. Speak for yourself, brother, if you want to talk that way, but don't make any claim to speak for the rest of the profession. For the vast majority of American physicians it is a libel. Moreover, if the man quoted practiced on that basis, we doubt if he could have been so "very successful" as the editor affirms. How could he be, if nonentity and pretense were the basis of his work?—*Clinical Medicine.*

## Book Notices

THE FOOD FACTOR IN DISEASE. Being an Investigation Into the Humoral Causation, Meaning, Mechanism, and Rational Treatment, Preventive and Curative of the Paroxysmal Neuroses, etc., and Other Degeneration. By F. Hare, M.D., vols. 1 and 2. Cloth. Pp. 497 and 535. Price, $10.00. New York: Longmans, Green & Co., 1905.

The author seems to have convinced himself, apparently by purely deductive reasoning, that in certain conditions carbonaceous material can accumulate in the blood and give rise to pathologic phenomena. This condition he terms "hyperpyremia," and he seems to consider it an essential, though not necessarily the sole factor in many disorders, and seeks to establish his theories by clinical facts. He also suggests that the paroxysmal neuroses depend on hyperpyremia and consitute acarbonizing processes. He lays great stress on the regulation of diet and on fresh air, sleep, and judicious exercise. In each individual case he determines by experiment the minimum carbonaceous intake compatible with carbon equilibrium. He quotes freely and at length from many authorities. He considers the three methods of dietetic treatment: restriction of food generally, without regard to its nature; restriction of proteid, and restriction of carbonaceous foods, and gives his reasons for preferring the last. In ordering a diet for a patient Hare states that he never gives verbal instructions such as, a little, etc., as they are too indefinite. He writes his instructions in full—a custom to be commended. Bread and fats, he says, should be as carefully weighed as drugs. Migraine and asthma, which are generally believed to be due to an excess of purin bodies, and which, therefore, are usually treated by a purin-free diet, Hare thinks, may be more effectively treated by restricting the amount of carbohydrates and fats and allowing the patient meat, fish and fowl. His theories are likely to have many opponents, though they are worthy of consideration.

A TEXT-BOOK ON PRESCRIPTION-WRITING AND PHARMACY, with Practice in Prescription-writing, Laboratory Exercises in Pharmacy and a Reference List of the Official Drugs, Especially Designed for Medical Students. By B. Fantus, M.D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Chicago. Second Edition. Thoroughly Revised and Adapted to the Eighth (1905) Edition of the U. S. Pharmacopeia. Cloth. Pp. 404. Price, $3.00 net. Chicago: Chicago Medical Book Co., 1906.

Part I is devoted to the writing of prescriptions and contains chapters on form and language of prescriptions, determination, quantities in prescriptions, the proper composition of prescriptions of various kinds, and prescription ethics. The author realizes that graduates in medicine are often sadly deficient in the art of prescription writing and because unable to originate prescriptions to meet the needs of their practice too readily fall into the traps set for them by the proprietary medicine merchant. This book should do much toward making graduates in medicine independent of ready-made proprietary mixtures. Part II is devoted to the pharmaceutical preparations of the various remedies, classified in the conventional way. Part III contains a brief description of the official drugs and their preparations. It is a relief to find that all chemical symbols and formulas have been omitted from the text and one can but regret that the same considerations which led the author to omit chemical symbols did not also decide the omission of such definitions as: "Eugenol—an unsaturated aromatic phenol, etc." and "Santonin=the anhydrid of santonic acid, etc." It is also to be regretted that this book, otherwise replete with well-selected, concise information, should give room to the botanic description of drugs. One can readily imagine the effect on the average student of medicine of the following: Lobelia: "Leaves alternate, pale green, pubescent; stem coarsely angled, hairy, terminating in long racemes of pale-blue flowers; capsules inflated, containing numerous minute seeds; odor slight, irritating; taste strongly acrid."

CLINICAL OBSTETRICS. By R. Jardine, Glasgow. Ninety-nine Illustrations and a Colored Plate. Second Edition. Cloth. Pp. 609. Price, $4.75. New York: Rebman Co. 1905.

Jardine calls attention to the fact that most practitioners gain their experience and knowledge of obstetrics after graduation, and states that it is for these men that his book is intended. Nine chapters are devoted to consideration of the complications of pregnancy, and one to the management of normal labor. Hemorrhages occurring in various stages of pregnancy and labor are considered at length. Complications of labor and the puerperium are discussed and obstetric operations are treated of exhaustively. The concluding chapters deal with accidents to the child during delivery, abnormalities and diseases of the new-born infant, and infant feeding. Jardine emphasizes the importance of breast nursing to the child and states that when it is impossible for a mother to nurse her child a good wet nurse is the best substitute. He gives directions for preparing the various artificial foods and for modifying cow's milk. An appendix contains statistics of thirty years' work in the Glasgow Maternity Hospital.

LECTURES ON CLINICAL PSYCHIATRY. By E. Kraepelin. Authorized Translation from the Second German Edition. Revised and Edited by T. Johnstone, M.D. Second Edition. Cloth. Pp. 352. Price, $3.50. New York: William Wood & Co.

American physicians will find this translation of Kraepelin's clinical lectures a very instructive work on the types and the diagnosis of mental disease. As the editor says, they are thoroughly practical and their value is enhanced by the fact that there is no psychiatric teacher at the present day whose ideas figure more largely in the literature than those of Professor Kraepelin. It will be found of value, both to the alienist and to the general practitioner, on whose judgment most frequently depends the earliest recognition and treatment of insanity when it occurs. Dr. Johnstone has appended to the lectures a classification of mental disorders in accordance with Kraepelin's latest views. The translation appears to be excellent and the avoidance of new technical terms so far as possible is a praiseworthy feature.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. Landis, M.D., vol. i, March, 1906. Paper. Pp. 304. Price, $6.00 per annum. Philadelphia: Lea Brothers & Co., 1906.

The subjects considered in this volume are: 1. The Surgery of the Head, Neck and Thorax, by Charles H. Frazier, M.D. 2. Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia and Influenza, by Robert B. Preble, M.D. 3. The Diseases of Children, by Floyd M. Crandall, M.D. 4. Rhinology and Laryngology, by D. Braden Kyle, M.D., and 5. Otology, by B. Alexander Randall, M.D. The general get-up of the book, the paper, print and indexing are of an enduring quality and make its use not only profitable but pleasurable. Physicians are so well acquainted with Progressive Medicine that it is unnecessary to do more than indicate in a general way the contents of each volume.

PREVENTION AND CURE OF TUBERCULOSIS. A Collection of Articles of a Popular Character on the Subject of Tuberculosis. By S. A. Knopf, J. H. Huddleston, D. A. Willey and Others. Compiled by J. R. Long. Cloth. Pp. 246. Price, $1.25. Denver: H. M. Brinker. 1905.

This is a reprint in book form of articles that have appeared in various medical journals on tuberculosis, by such men as Drs. S. A. Knopf, J. H. Huddleston, Day Allen Willey, Henry P. Loomis, Henry B. Dunham, Robert W. Craig, William N. Beggs, George E. Abbott, Guy Hinsdale, Chase P. Ambler,

Joseph Eichberg, and others. The compiler evidently had in mind supplying a book for the layman, but we are afraid that some of the matter is presented in a way that will not appeal directly to the public. The compiler, however, has made a selection of some splendid articles and, presenting them in a compact form, as is here done, will be an aid in propagating the knowledge that the public ought to have in regard to this dreaded disease.

SURGICAL NURSING and the Principles of Surgery for Nurses. By R. Howard, M.B., M.S., F.R.C.S. Cloth. Pp. 318. Price 6s. London: E. Arnold, 1905.

The basis of this book is a series of lectures on surgical nursing given to the probationers at the London Hospital. The author states that modern nursing has passed beyond the stage of passive obedience and that a nurse must now understand the principles on which a surgeon is working. The general arrangement of the subject matter is good and the language is clear and concise. The book is well illustrated. An appendix contains formulæ for enemata of various kinds, mouth washes, eye washes and dusting powders. There are also directions for preparing nourishment for "nasal feeding," for pancreatizing and peptonizing milk, and for test meals.

## Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

### CONTRACT PRACTICE.

FAYETTEVILLE, ARK., April 3, 1906.

*To the Editor:*—In THE JOURNAL, March 31, you very pertinently, as I think, reply to Mr. Stone, president of the Baltimore Casualty Company in reference to fees for examiners, partly as follows: "And no self-respecting physician ought to sell his services to such a corporation at wholesale, and have them retailed to the people of his own community at prices which have enabled these companies to amass a fortune, and, until recently to defy public opinion." All very true, but what of those medical gentlemen who along the lines of our railroads hold subordinate positions as "railroad surgeons," having signed an obligation to work for these corporations for less fees than they would serve the mechanics and laborers, among whom they reside. It is true that they are given a piece of cardboard, a pass. The subordinate "railroad surgeon" signs a fee bill supplied by the corporation, so contemptibly low as to shame the self-respect of most medical men who are not readily inflated by the title of "railroad surgeon." (What I say is true unless there has been a recent change, but I have heard of no complaint from these employés, and suppose they sign now as heretofore.)

W. B. WELCH, M.D.

### TREPONEMA PALLIDUM.

NASHVILLE, TENN., March 31, 1906.

*To the Editor:*—What is the meaning and pronunciation of the term *Treponema pallidum*, as advocated by Schaudinn instead of the term *Spirochæta pallida*?

ANSWER.—In June, 1905, Vuillemin took *Spirochæta pallida* as a type of a new genus *Spironema*, using the specific name *Spironema pallidum*. As the name *Spironema* is preoccupied in zoology, having been used by Meek in 1864 for a genus of mollusks, the present correct name of the parasite under the international code is *Treponema pallidum*. The term is pronounced tree-po-nee-mah pahl-ee-dum. Its meaning is a pale, turning thread.

### TOY PISTOLS AND OTHER SIMILAR DEVICES.

A member of a machinery manufacturing firm of Claiborne, N. H., who has been instrumental in having an ordinance passed prohibiting the sale or use of toy pistols, fire crackers, exceeding 6 inches in length, canes, bombs and other contrivances using dangerous explosives, writes: "Inasmuch as I have taken this prominent stand in the matter, very likely inquiries will be made of me as to what explosives are considered dangerous, and what the limiting features are of the toy pistols and other similar devices for the use of dangerous explosives, and I would greatly appreciate any information you can give me along these lines. I assume you will be willing to give me this information as soon as you can conveniently do so, owing to your interest in this matter."

ANSWER.—The term "toy pistol" has an indefinite meaning that has led to confusion, and also to unnecessary legislation. There are two types of this implement. One is made for the shooting of small flat paper caps, and in all the records obtained by THE JOURNAL concerning tetanus there have been no instances of the disease due to infection of wounds caused by these caps. Occasionally injury to the eye is produced by particles from the exploding caps, but they seldom cause serious injury. The "toy pistol" that causes tetanus is the cheap contrivance made for the purpose of exploding blank cartridges, generally of .22-caliber. Many of the tetanus wounds are also produced by cheap .22-caliber revolvers, and occasionally by blank cartridges discharged in larger-sized revolvers. As to the other forms of Fourth of July explosives it may be said that there is none that has not at some time or other caused serious injury. We have records of tetanus following burns from rockets, and even from the explosion of large set pieces in the hands of professionals. However, few serious injuries have been produced by any of the display fireworks used at night, or from the small-sized firecrackers, although all of these have caused much property loss from fires. The small paper torpedoes are also practically harmless. If we can get rid of the blank cartridge, the giant cracker, and the toy cannon, the mental and physical suffering of the Fourth will be practically abolished.

## State Boards of Registration

### COMING EXAMINATIONS.

MISSOURI State Board of Health University Medical College, Kansas City, April 16-18. Secretary, J. A. B. Adcock, Warrensburg.

ILLINOIS STATE BOARD OF HEALTH, Northwestern University Building, Chicago, April 18-20. Secretary, J. A. Egan, Springfield.

**Connecticut March Report.**—Dr. Charles A. Tuttle, secretary of the Connecticut Medical Examining Board, reports the written examination held at New Haven, March 13-14, 1906. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of applicants examined was 15, of whom 11 passed and 4 failed. The following colleges were represented:

PASSED.

| College. | Year Grad. | Per Cent. |
|---|---|---|
| Maryland Med. Coll. | (1905) | 75.3 |
| Tufts College Medical School | (1903) | 80.4 |
| Harvard University | (1903) | 81.3 |
| Queen's University, Canada | (1904) | 77.2 |
| University of Buffalo | (1895) | 85.4 |
| College of P. and S., New York | (1903) | 85.3 |
| Yale University | (1905) | 80.1 |
| Tulane University | (1905) | 82.1 |
| College of P. and S., Baltimore | (1904) | 82.3 |
| University of Maryland | (1903) | 80.4 |
| College of P. and S., Boston | (1903) | 84.8 |

FAILED.

| | | |
|---|---|---|
| University of the South | (1905) | 69.1 |
| College of P. and S., Chicago | (1905) | 69.1 |
| Georgetown University | (1904) 72.8; (1905) | 73.4 |

## The Public Service

### Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending April 7, 1906.

Lambert, Samuel E., asst.-surgeon, at expiration of his present leave of absence will proceed to and take station at Fort Wright, Wash.

Duncan, Louis C., asst.-surgeon, on arrival at San Francisco, will proceed to and take station at Fort Missoula, Mont.

Richard, Charles, surgeon, is detailed to represent the Medical Department of the Army at the 15th International Congress of Medicine, to be held at Lisbon, Portugal, April 19 to 25.

Egan, Peter R., surgeon, retired from active service, April 2.

Marrow, Chas. E., asst.-surgeon, granted ten days' leave of absence.

Barney, Charles N., asst.-surgeon, advanced from grade of first lieutenant to that of captain, with rank from January 12.

Appel, D. M., deputy surgeon-general, on arrival at San Francisco, will assume charge of medical supply depot in that city, relieving Lieutenant-Colonel Louis Brechemin, deputy surgeon-general.

Brechemin, Louis, deputy surgeon-general, on being relieved from charge of medical supply depot, San Francisco, will proceed to New York City, and assume charge of medical supply depot in that city, relieving Lieutenant-Colonel William B. Davis, deputy surgeon-general.

Davis, William B., deputy surgeon-general, on being relieved from charge of medical supply depot, New York City, will proceed to Chicago, and report in person to the commanding general, Department of the Lakes, for duty as chief surgeon of that department.

Reagles, James, contract surgeon, ordered from Fort Keogh, Mont., to Fort Snelling, Minn., for temporary duty.

Chase, Alpha M., contract surgeon, ordered from Fort Reno, Okla., to Fort Clark, Texas, for temporary duty.

Mason, George L., dental surgeon, left Key West Barracks, Fla., and arrived at Fort Morgan, Ala., for duty.

Casaday, George H., dental surgeon, returned to duty at Army General Hospital, Presidio of San Francisco, from leave of absence.

Stone, Frank P., dental surgeon, left Army General Hospital, Presidio of San Francisco, on leave of absence.

Ware, William H., dental surgeon, left Fort Logan, Colo., for Fort Wingate, N. M.; and ordered to visit in succession Fort Apache, Ariz.; Whipple Barracks, Ariz.; and Fort Huachuca, Ariz.

## Navy Changes.

No changes in the Medical Corps of the Navy for the week ending April 7, 1906:

## Public Health and Marine-Hospital Service.

List of changes and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending April 4, 1906:

White, J. H., surgeon, granted leave of absence for two days under Paragraph 189 of the Regulations.

Rosenau, M. J., P. A. surgeon, detailed to represent the service at session of the American Medical Association at Boston, Mass., June 5-8, 1906.

Fricks, L. D., P. A. surgeon, relieved from duty at Ellis Island, N. Y., and directed to proceed to Fort Stanton, N. M., reporting to the medical officer in command for duty and assignment to quarters.

Stansfield, H. A., P. A. surgeon, granted two days' leave of absence under Paragraph 191 of the Regulations.

McClintic, T. B., P. A. surgeon, relieved from duty in the Hygienic Laboratory, Washington, D. C., and directed to proceed to San Francisco Quarantine Station, reporting to the medical officer in command for duty and assignment to quarters.

Goldberger, Joseph, P. A. surgeon, granted extension of leave of absence for two days from May 2, 1906.

Olsen, E. T., asst. surgeon, relieved from duty at New York and directed to proceed to Chicago, reporting to the medical officer in command for duty and assignment to quarters.

Adams, F. B., acting asst.-surgeon, granted leave of absence for fifteen days, from April 6.

Frissell, C. M., acting asst.-surgeon, granted leave of absence for ten days, from March 22, 1906.

Luckey, J. W., acting assistant surgeon, granted leave of absence for thirty days, from March 30, 1906.

McKinley, W. R., acting asst.-surgeon, granted leave of absence for thirty days, from March 23, 1906.

Van Ness, G. I., pharmacist, directed to proceed to Baltimore, for temporary duty, on completion of which to rejoin his station in Washington, D. C.

## Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service during the week ended April 6, 1906:

SMALLPOX—UNITED STATES.

California: Los Angeles, March 17-24, 6 cases.
Florida: Jacksonville, March 24-31, 2 cases.
Indiana: Indianapolis, March 18-April 1, 6 cases.
Kansas: General, Feb. 1-28, 233 cases; Leavenworth, March 1-31, 5 cases.
Louisiana: New Orleans, March 24-31, 9 cases.
Maryland: Baltimore, March 24-31, 1 case.
Massachusetts: Boston, March 24-31, 3 cases.
Michigan: Ann Arbor, March 24-31, 1 case.
Missouri: St. Louis, March 24-31, 5 cases.
Nebraska: Omaha, March 17-24, 1 case.
New York: New York, March 24-31, 2 cases.
North Dakota: Grand Forks County, Feb. 1-28, 1 case; McHenry County, 1 case.
Ohio: Cincinnati, March 23-30, 3 cases.
South Carolina: Greenville, March 17-24, 2 cases.
Tennessee: Memphis, March 24-31, 8 cases.
Washington: Spokane, March 17-24, 1 case, imported.
West Virginia: Wheeling, March 24-31, 2 cases.
Wisconsin: Appleton, March 24-31, 3 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, Feb. 10-24, 2 cases, 1 death.

SMALLPOX—FOREIGN.

Africa: Cape Town, Feb. 17-24, 19 cases.
Brazil: Pernambuco, Feb. 14-28, 23 deaths.
Canada: Toronto, March 17-24, 2 cases.
Cape Verde Islands: March 29, present.
Chile: Iquique, Feb. 17-24, 6 cases, 2 deaths.
China: Shanghai, Feb. 17-24, 2 deaths.
France: Paris, March 10-17, 13 cases.
Gibraltar: March 11-18, 10 cases.
Great Britain: Bristol, March 17-24, 1 case.
Greece: Athens, March 8-15, 1 death.
Honduras: Puerto Cortez, March 17-24, present; San Pedro, March 17-24, present.
India: Bombay, Feb. 13-March 6, 24 deaths; Calcutta, Feb. 17-24, 173 cases, 173 deaths; Madras, Feb. 24-March 2, 50 deaths; Rangoon, Feb. 17-24, 77 deaths.
Italy: General, March 10-17, 9 cases.
Japan: Formosa, Feb. 1-28, 12 cases; Yamaguchi Ken, March 6, 27 cases, 4 deaths.
Russia: Moscow, March 3-10, 7 cases, 3 deaths; Odessa, March 3-17, 24 cases, 2 deaths; St. Petersburg, Feb. 24-March 10, 4 cases.
Spain: Barcelona, March 10-20, 7 deaths; Seville, Feb. 1-28, 12 deaths.
Turkey: Constantinople, Feb. 25-March 11, 2 deaths.

YELLOW FEVER—FOREIGN.

Mexico: Merida, March 11-17, 1 case, 1 death; Tehuantepec, 1 case.

CHOLERA—INSULAR.

Philippine Islands: Manila, Feb. 10-24, 11 cases, 10 deaths; Provinces, Feb. 10-24, 371 cases, 293 deaths.

CHOLERA—FOREIGN.

India: Calcutta, Feb. 17-24, 65 deaths; Rangoon, 2 deaths.

PLAGUE—FOREIGN.

Australia: Freemantle, Jan. 6-Feb. 19, 5 cases, 2 deaths; Perth, Jan. 6-12, 3 cases.
India: General, Feb. 17-24, 9,717 cases, 8,312 deaths; Bombay, Feb. 13-March 6, 484 deaths; Calcutta, Feb. 17-24, 31 deaths; Madras, Feb. 24-March 2, 5 deaths; Rangoon, Feb. 17-24, 19 deaths.
Japan: Formosa, Feb. 1-28, 94 cases, 69 deaths.
Mauritius: Jan. 25-Feb. 8, 3 cases, 1 death.

# Medical Organization

## THE GREAT WORK BEING DONE IN TEXAS.

**J. N. McCormack, M.D.**
Chairman of the Committee on Organization of the American Medical Association.
BOWLING GREEN, KY.

The leaders of the profession of Texas were among the first to catch the real spirit of modern organization. Loyal, and tenacious of their opinions, many of the older members were reluctant to join in the movement at first, but, once convinced of its merits and possibilities, they have vied with the young men and each other in promoting it. I was present at the reorganization at San Antonio in 1903, and then and in subsequent visits these men have constantly reminded me of the Japanese in their activity, resourcefulness and aggressive determination.

They have had more than the usual difficulties to encounter, and have made some serious mistakes, as will appear presently, but have overcome the former and corrected the latter with such commendable temper, courage and wisdom as constantly to challenge admiration; and the good results of all this were and are to be seen at every stage of the proceedings.

Starting out with few county societies and a total state membership of 435, in one year's time 160 counties had been organized, and the membership had grown to 2,390, and is expected to reach over 3,000 before the next annual meeting, which is to be held during the present month. I can testify from personal observation that the increase in professional interest and enthusiasm is even greater than the above figures would indicate, and is still growing.

At the outset the difficulties confronting the active, earnest, self-sacrificing councilors often seemed insurmountable, but they had the genuine reform spirit and usually were able to turn these into actual advantages. For instance, there were a number of large, influential district societies to which many physicians were naturally wedded, and which at one time promised to be an endless source of contention, but, with the exercise of tact and good temper on all sides, nearly all of these were promptly woven into the new plan and made an element of real strength. The same good judgment was followed with many other of the obstacles which have given so much trouble elsewhere.

In the same spirit, their arrangements for my itinerary were more prompt and comprehensive than those heretofore made in any other state. As soon as I could give them the date of my first appointment and the length of time at their disposal, a meeting of the council was called, and, with the assistance of an experienced passenger agent, the trip was carefully planned, covering every section of the state to the best advantage in the least possible time. This was so well done that I publish the itinerary in full as a model for others who may be charged with a similar duty. See page 1134.

The widest possible publicity was given to the appointments, through the *Texas State Journal of Medicine* and the secular press, and personal letters were sent to all medical men by their respective councilors and county secretaries, explaining the purposes and importance of the meetings, and urging attendance. Later it was decided, on my advice, to extend the invitation to the laity, and this was done with most satisfactory results in many sections, although not with the full benefit which would have been possible if its desirability could have been foreseen earlier.

In magnificent distances, as in many other respects, Texas is truly an empire, but the councilors attended and actively participated in every meeting in their respective districts, and frequently in others, and the president and secretary of the Texas State Association, and chairman of the council, came to meeting after meeting, often involving hundreds of miles of travel and three or four days in time. It is largely to this enthusiastic, self-sacrificing devotion to duty on the part of those honored with office which has infused the desire for better things into every element of the profession, and which promises so much for the future of this great state.

The meeting at San Antonio may be taken as fairly typical, although the attendance of the laity was not such a distinctive feature as it was made subsequently. Unfortunately, in the excess of a characteristic hospitality, much time was consumed in an elaborate banquet which was needed for the intensely practical discussion which followed. In addition to the entire regular profession, there were present several physicians of other schools, members of the judiciary, the prosecuting attorney, legislators and many other representative laymen. This historic, health-resort city has been overrun with charlatans for years, some of them practicing under assumed names, or under authority of certificates issued to others, as is so common with this class everywhere, but so strongly had they seemed entrenched that, even after the profession had become effectively organized for other purposes, it had feared to attempt to dislodge them. After my opening talk this was taken up as one of the subjects for discussion. The provisions of existing statutes, and the possibility and methods of securing additional legislation, were frankly gone into, and it soon developed, as I had found to be the case everywhere, that the laymen took quite as active and intelligent interest in all of these matters as the medical men. They expressed surprise at the conditions unfolded to them, and that the laws had not been enforced or strengthened, and promised a most cordial co-operation in any proper efforts having these ends in view. It was the same with the "patent medicine" and other similar evils, and with securing and executing laws for the protection of the people against pestilence, and especially against consumption, typhoid fever, diphtheria, cholera infantum, dysentery and other everyday household plagues. These laymen had either ignored these matters entirely or had underestimated their practical importance, and only the plain, common-sense instructions which fearless, progressive physicians alone can give was needed to enlist their active interest.

The attendance and participation of laymen in the regular discussion marked a new feature in the growth and scope of my work and is entitled to more than a passing mention. I had often addressed distinctively popular audiences, and representative laymen had been present at some of the meetings as far back as the trip in Pennsylvania, but these had been incidental occurrences rather than part of a fixed plan. The advisability of making it a permanent feature of the work, the beginning of a campaign of education, as it were, had long been in my mind and the subject of discussion with my colleagues. After the San Antonio meeting the public was cordially embraced in every invitation. Lawyers, ministers, teachers, legislators, farmers, business men, city and county officials, and especially the women, were urged to attend and to participate in the discussions, and with most satisfactory results. It has been found easy to demonstrate to any intelligent layman that his physician, and the profession as a whole, has no interest which he does not share, and that the daily safety and well-being of his family is inseparable from the continued prosperity and competency of his physician, and of the profession of his county, state and country as a whole.

It was easy to interest the leaders of this profession almost everywhere in any practical proposition looking to the advancement of their own and the public interests. Weekly meetings were begun very generally, and regular postgraduate courses were established shortly after my visits at Waco, Austin, Tyler, Fort Worth and Amarillo and other places; that at Waco meeting three nights in each week and giving a full course in anatomy with demonstrations on the cadaver, combined with some practical subject or a clinic for each evening. In several counties conferences with the laity have been continued as the result of my visit, and, in some, joint meetings have been arranged with the farmers' organizations for the purpose of working out some systematic plan of compensation for medical services for the tenant class and other similar matters.

The harmony which had come to the profession in nearly every county in two or three years, as a result of the frequent meetings, and the promise of co-operation in advancing its varied interests, was most gratifying, and even exceeded my expectations. Almost the only discordant note heard was at Dallas, where a strong and excellent profession, with great possibilities open to it, was divided by a school fight, on the plane usually found, and not relieved by the high personal and professional character and abilities of those leading in it. So far as I could judge, there was no interest involved not entirely personal and selfish, and yet the antagonism was as outspoken and implacable as if some great principle was involved. Such conditions ought not to be tolerated in any medical center, and, knowing from my large experience the irreparable harm which school feuds have brought to us in the past, I frankly advised the profession of Texas not to send students to the schools in Dallas until those engaged in molding the character of young doctors could at least set an example in peace and harmony in their own community.

| FROM | TO | VIA. | DATE. | LEAVE. | ARRIVE | DATE OF ARRIVAL | MILEAGE |
|---|---|---|---|---|---|---|---|
| **El Paso** | San Antonio | G. H. & S. A. | Oct. 31 | 8:00 p. m. | 8:00 p. m. | Nov. 1 | 623 Miles. |
| **San Antonio** | Austin | L. & G. N. | Nov. 3 | 8:00 a. m. | 11:00 a. m. | Nov. 3 | 79 " |
| **Austin** | Beaumont | H. & T. C. | Nov. 3 | 10:10 p. m. | 6:10 a. m. | Nov. 4 | 166 " |
| | | T. & N. O. | Nov. 4 | 6:30 a. m. | 9:05 a. m. | Nov. 4 | 84 " |
| **Beaumont** | Galveston | T. & N. O. | Nov. 5 | 7:25 a. m. | 10:15 a. m. | Nov. 5 | 84 " |
| | | G. H. & N. | Nov. 5 | 10:30 a. m. | 12:10 p. m. | Nov. 5 | 57 " |
| | | November 5, Sunday, in Galveston. | | | | | |
| **Galveston** | Houston | G. H. & N. | Nov. 7 | 10:30 a. m. | 12:10 p. m. | Nov. 7 | 57 " |
| Houston | Waco | H. & T. C. | Nov. 8 | 10:30 a. m. | 5:25 p. m. | Nov. 8 | 186 " |
| Waco | Cleburne | M. K. & T. | Nov. 9 | 4:50 a. m. | 8:05 a. m. | Nov. 9 | 100 " |
| **Cleburne** | Fort Worth | G. C. & S. F. | Nov. 9 | 7:20 p. m. | 8:30 p. m. | Nov. 9 | 30 " |
| | | T. & P. | Nov. 11 | 9:00 a. m. | 12:45 p. m. | Nov. 11 | 31 " |
| **Fort Worth** | Mineral Wells | W. M. W. & N. W. | Nov. 11 | | | | 20 " |
| | | November 12, Sunday in Mineral Wells. | | | | | |
| **Mineral Wells** | Dallas | W. M. W. & N. W. | Nov. 13 | 7:35 a. m. | 11:35 a. m. | Nov. 13 | 63 " |
| | | T. & P. | Nov. 13 | | | | 26 " |
| **Dallas** | Greenville | M. K. & T. | Nov. 14 | 11:20 a. m. | 1:15 p. m. | Nov. 14 | 54 " |
| **Greenville** | Tyler | M. K. & T. | Nov. 15 | 7:00 a. m. | | Nov. 15 | 51 " |
| | | I. & G. N. | Nov. 15 | 2:45 p. m. | 3:30 p. m. | Nov. 15 | 26 " |
| **Tyler** | Pittsburg | St. L. S. W. | Nov. 16 | 12:55 p. m. | 3:17 p. m. | Nov. 16 | 52 " |
| Pittsburg | Texarkana | St. L. S. W. | Nov. 17 | 4:16 a. m. | 7:00 a. m. | Nov. 17 | 76 " |
| **Texarkana** | Paris | T. & P. | Nov. 18 | 6:20 a. m. | 9:48 a. m. | Nov. 18 | 91 " |
| | | November 19th, Sunday, in Paris. | | | | | |
| **Paris** | Bonham | T. & P. | Nov. 20 | 7:39 a. m. | 9:20 a. m. | Nov. 20 | 37 " |
| Bonham | Sherman | T. & P. | Nov. 20 | 9:00 p. m. | 10:04 p. m. | Nov. 20 | 28 " |
| Sherman | Denison | H. & T. C. | Nov. 21 | 10:35 p. m. | 10:53 p. m. | Nov. 21 | 10 " |
| **Denison** | Gainesville | M. K. & T. | Nov. 22 | 4:35 p. m. | 6:20 p. m. | Nov. 22 | 41 " |
| **Gainesville** | Amarillo | M. K. & T. | Nov. 23 | 6:20 p. m. | | Nov. 23 | 89 " |
| | | Ft. W. & D. C. | Nov. 23 | 12:45 p. m. | 8:45 p. m. | Nov. 24 | 220 " |

In several conferences with the laity have been continued as the result of my visit, and, in some, joint meetings have been arranged with the farmers' organizations for the purpose of working out some systematic plan of compensation for medical services for the tenant class and other similar matters.

Under the general conditions portrayed in the foregoing, and seemingly so favorable on the surface, there is ample ground for serious thought, and for grave apprehension for the future, on the part of every thoughtful member of the profession in Texas. Both the medical and health laws are far from satisfactory, and, so far, it has been impossible to unite even the leaders of the profession on the character of the changes to be made. At the last session of the general assembly the members of the committee having the proposed legislation in charge were hopelessly divided in their own counsels, and, without a recognized leader, their raw medical troops, over 2,500 strong, were led against the small, compact army of quackery, which knew what it wanted, and how to go after it, with a better result than might have been expected—a drawn battle. Senators and representatives should have the unselfish principles underlying health and medical legislation explained to them in the county societies and by their family and home physicians while they are candidates and in a receptive mood. Nearly every vote can be controlled by education, moral suasion, and home influence in advance, while only harm can result from bluster and threats later, when the current has set in the wrong direction.

Our friends in Texas have accomplished so much in a short time within their own ranks, they are so strong in numbers, they have such a domain, with widely separated men of equal standing and importance, that further defeats may be necessary before they can get together in these matters and unite on a leader for legislative work in whom they can place implicit confidence. They must agree among themselves, and one man, in touch with, and having the full confidence and co-operation of, the profession in each county, and not a committee, must have charge of the real work. Even if it requires years of waiting it would probably be better for them not to enter the legislative lists again voluntarily until this can be done. They have the advantage of a strong and ably edited state journal for frequent inter-communication; they have an accomplished and devoted secretary and executive officer, and a great and practically united profession, and with the discipline which frequent meetings and co-operative work will bring to them, they can and ought to be an example for other states in the field of organized medicine.

## Society Proceedings

### COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Boston, June 5-8.

Medical Assn. of State of Alabama, Birmingham, April 17.
Medical Society of State of California, San Francisco, April 17-19.
Florida Medical Association, Gainesville, April 18.
Medical Association of Georgia, Augusta, April 18.
Mississippi State Medical Association, Jackson, April 18.
South Carolina Medical Association, Columbia, April 18.
State Medical Association of Texas, Fort Worth, April 24-26.
Arizona Medical Association, Phoenix, April 24-25.
Medical and Chirurg. Faculty of Maryland, Baltimore, April 24-26.
Nebraska State Medical Association, Lincoln, May 1-3.
New Mexico Medical Association, Albuquerque, May 2.
American Therapeutic Society, New York City, May 3-5.
Oklahoma Medical Association, Oklahoma City, May 8.
Indian Territory Medical Association, Oklahoma City, May 8.
Utah State Medical Association, Salt Lake City, May 8-9.
Nevada State Medical Society, Reno, May 8-9.
Louisiana State Medical Society, New Orleans, May 8-10.
Arkansas Medical Society, Hot Springs, May 8-10.
Montana State Medical Association, Butte, May 9-10.
Kansas Medical Society, Topeka, May 9-11.
American Climatological Assn., Atlantic City, N. J., May 12-14.

### CHICAGO SURGICAL AND CHICAGO MEDICAL SOCIETIES.

*Joint Meeting held Feb. 28, 1906.*

The Vice-president of the Chicago Surgical Society, DR. D. W. GRAHAM, in the Chair.

#### Postoperative Intestinal Obstruction.

DR. J. M. T. FINNEY, Baltimore, Md., detailed 26 cases, and after referring at length to the literature of other cases, drew the following conclusions: 1. Broca's classification into early and late varieties simplifies the diagnosis. In the former class, which so frequently is associated with peritonitis, the differential diagnosis as to variety is always difficult and often impossible. In the latter, which is composed almost exclusively of the mechanical forms, it is usually easy. 2. Adhesions are the chief factor to be reckoned with in an attempt to prevent the occurrence of postoperative ileus, and efforts directed toward this end are likely to be productive of the best results. 3. That drainage exercises a marked influence in the production of adhesions can not be denied. 4. As to treatment, prompt operation is indicated in every case after palliative measures have been given a fair trial and have failed. The character of the operation depends on the nature of the obstruction and the condition of the patient. 5. The prognosis is unfavorably influenced by the presence of infection. In its absence it is excellent.

#### Dynamic Ileus.

DR. JOHN B. MURPHY, Chicago, defined ileus as a train of symptoms consisting of four essential elements: pain in the abdomen, nausea and vomiting, meteorismus and coprostasis. Using this as a guide, he subdivided ileus into adynamic ileus, dynamic ileus and mechanic ileus. Under adynamic ileus he includes all of the conditions that are due to the absence of power of propulsion. Under dynamic ileus he includes the two conditions where the obstruction is due to an excess of power, and excessive contraction of the muscular wall. Under mechanic ileus he includes all the mechanical conditions, whether of the strangulation or obturation variety, which impede the advancement of the contents of the intestinal canal in a mechanical way. The cases which puzzle the general practitioner and surgeon are those included under adynamic ileus. One of the first causes of this form of ileus is strangulation of the omentum. Strangulation of the omentum produces a reflex paralysis of peristalsis. The colic which occurs with hepatic calculus is difficult to differentiate from mechanical obstruction, because there is pain, nausea and vomiting, absence of peristalsis, with distension of the bowel coming on as the result of the paralytic condition; also coprostasis if the pain is severe.

One of the very difficult conditions to diagnose differentially is the impaction of stone in the cystic duct. There is another class of cases in which the manifestations of ileus are pronounced from the ligation of pedicles, and he thinks since the practice of ligating pedicles *en masse* has ceased, there is much less vomiting after operations and fewer cases of paralytic ileus now than formerly. Gastric tetany is another condition that is mistaken for intestinal obstruction. Peritoneal trauma is a cause of paralytic ileus. The embolic type of paralytic ileus is due to two causes—interference with the nerve supply and ischemia. Temperature is never a primary symptom in mechanic ileus, not even in intussusception in children. He thought at one time that leucocytosis was going to be of enormous value in the differential diagnosis. He believed that the infective type would show a high leucocyte count, while the mechanical type would show a low leucocyte count. But he has been greatly disappointed. He has seen a 36,000 leucocyte count (differential) in mechanic ileus. He has likewise seen a 7,000 leucocyte count in a case of septic peritonitis, so that he has ceased to place any particular value on the differential diagnosis as to the number of leucocytes.

#### Strangulation Ileus.

DR. ARTHUR DEAN BEVAN, Chicago, said that strangulation ileus is best studied from the standpoint of a strangulated hernia. It is a form of ileus which comes on as a strangulated hernia does, with sudden onset, shock, pain, obstruction of the bowel, vomiting, with, later, tympany, and, if unrelieved, peritonitis takes place followed by death. It is at the beginning free from temperature. The diagnosis can be made early if the surgeon has a clear mental picture of what strangulation ileus means. A long appendix or adhesions to a tube may cause obstruction. A most common cause is probably volvulus. He recently saw a case of volvulus of the entire transverse colon which caused obstruction. The forms of ileus which are described as due to strangulation in the retroperitoneal fossæ are quite infrequent. They do occur, however, and must be kept in mind. The proper treatment of a case of strangulation ileus is immediate operation. Patients with mechanical ileus die because an early diagnosis is not made, because early operation is not done, but in whom early diagnosis and early operation would have saved life.

#### Obturation Ileus.

DR. WILLIAM E. SCHROEDER mentioned the classification of Schlange, who considers obturation ileus as including compression from without, strictures, both benign and malignant tumors in the lumen of the intestine, intussusception, and the usual obturation forms, namely, from gallstones, enteroliths, foreign bodies and fecal masses. The nature of the obstruction consists in the simple closure of the lumen of the intestine, either primarily from within, or through compression from without. He discussed the symptoms of the acute forms of obturation ileus; also the diagnosis.

In obturation ileus enterotomy is of especial value in relieving the intestine of its poisonous contents and because of the simplicity of the operation. A radical operation may follow at some future time when the patient is in better condition. In strangulation ileus it is necessary to relieve the

strangulated intestine and save it from gangrene, or to resect the gangrenous portion. Cases of ileus come into the hands of surgeons far too late. Many general practitioners wait for fecal vomiting before they transfer their cases to the surgeon.

### Abuse of Cathartics in Obstruction of Bowel.

DR. M. L. HARRIS, Chicago, recently saw a patient suffering from a strangulated inguinal hernia with an enormous abdomen and vomiting every few minutes, who was still trying to get his physic down between vomits; and another with acute appendicitis where the attendant wondered why no result followed the cathartics, in which an operation disclosed a very large opening in the cecum left by the sloughing off of the appendix and through which the intestinal contents chased by the cathartics had escaped into the abdominal cavity. Other cases illustrating all the varieties of intestinal obstruction were mentioned. He said that cathartics should never be given to a patient suffering with an acute abdominal trouble until a diagnosis has been made, or if not an accurate diagnosis, at least until all of the conditions which may produce obstruction have been positively excluded, and it should be remembered that these patients are never sick because the bowels do not move, but the bowels do not move because they are sick.

DR. FERNAND HENROTIN, Chicago, said there are many cases in which catharsis is given when the diagnosis is not clear, where the symptoms are not typical, so as to render the making of an accurate diagnosis more easy, and in such the administration of a cathartic is permissible. He spoke of the value of enterostomy in ileus, and of not stopping to do a radical operation in the advanced cases.

DR. FINNEY said the plea of Dr. Harris to lessen the number of cathartics given to these suffering patients is very timely. Surgeons are agreed that cathartics have a limited place, but their administration should not be overdone.

## SASKATCHEWAN MEDICAL ASSOCIATION.

*Regular Meeting, held at Saskatoon, March 14-15, 1906.*

The constitution and by-laws prepared by the executive committee were read and adopted. A draft of the new medical act was presented and unanimously endorsed.

### Officers Elected.

The following were elected for the ensuing year: Honorary president, M. M. Seymour, Regina; president, J. W. Kemp, Indian Head; vice-presidents, T. C. Spence, Prince Albert, and H. Eaglesham, Weyburn; secretary-treasurer, G. A. Charlton, Regina; executive committee, A. B. Stewart, Rosthern; A. W. Allingham, Broadview; C. M. Henry, Yorkton.

### Tuberculosis Treatment Needed by Indians.

Resolutions were passed memorializing the provincial government as to the necessity of enacting a public health act at the coming session of the legislature, and also asking measures for the prevention of tuberculosis within the province, as follows:

*Resolved*, That the secretary of this association be instructed to memorialize the Dominion government as to the necessity of taking immediate and definite action with regard to the treatment and prevention of tuberculosis among the Indians on reserves and in the industrial and other schools in this province by the establishment of sanitaria in the vicinity of Indian reserves. Attention is directed to the amount of tuberculosis existing among the Indian children attending schools, and the necessity of removing infected children to sanitaria where they may be treated separately, and no longer be a source of transmitting the disease to others; and also that cases of tuberculosis occurring among adults and others not in the schools may be properly isolated and treated.

Papers were read by Dr. M. M. Seymour, Regina; Dr. W. Henderson, South Qu'Appele, and Dr. G. A. Charton, Regina, and will be published, with a full report of the transactions in the *Saskatchewan Medical Journal*, which is to be issued. A banquet was tendered the members of the association by the local medical society.

The next meeting will be held at Prince Albert as soon as possible after the close of the coming British Medical Association meeting at Toronto in August.

# *Therapeutics*

**[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]**

### Scabies.

The following outline of treatment is recommended by Renault in *Jour. des Pract.* in the treatment of scabies. The skin should be thoroughly cleansed with a soft soap and the following ointment applied:

| | | | |
|---|---|---|---|
| ℞. | Sulphuris sublim. | ʒi | 30 |
| | Potassii carbonatis | ʒiii | 12 |
| | Adipis | ʒss | 15 |

M. Ft. unguentum. Sig.: Apply locally and allow it to remain in place for twenty-four hours.

As a milder ointment the following is recommended:

| | | | |
|---|---|---|---|
| ℞. | Glycerini | ʒi | 30 |
| | Sulphuris sublim. | ʒss | 15 |
| | Potassii carbonatis | ʒiiss | 10 |
| | Pulv. tragacanthæ | gr. iv | 25 |
| | Olei lavendulæ | m. v | 30 |

M. Sig.: Apply locally.

If pruritus persists after the application of one of the foregoing ointments, the following combination is recommended:

| | | | |
|---|---|---|---|
| ℞. | Acidi carbolici | gr. xv | 1 |
| | Glycerini | ʒiii | 120 |

M. Sig.: Apply locally.

### Senna.

The principal constituent of senna is cathartic acid, which causes it to rank as an active cathartic. It is said that the use of senna to correct constipation does not tend to produce constipation, as is the case with a great many cathartics. It is one of the most common laxatives administered to pregnant women, in the form of a confection or compound licorice powder, and these preparations are of value in the treatment of constipation of young children. According to Beasley, it sometimes causes griping and occasionally nausea, but it is free from any astringent effects.

The following combination is recommended by him as a draught to be taken the first thing in the morning after having taken a mercurial pill the previous night:

| | | | |
|---|---|---|---|
| ℞. | Misturæ sennæ co. | ʒiss | 45 |
| | Tincturæ card. co. | ʒss | 2 |

M. Ft. mistura. Sig.: To be taken on rising in the morning.

In cases of constipation accompanied by hemorrhoids the following combination is advised:

| | | | |
|---|---|---|---|
| ℞. | Confect. sennæ<br>Confect. sulphuris, ää | ʒi | 30 |

M. Sig.: One to two teaspoonfuls at bedtime. Or:

| | | | |
|---|---|---|---|
| ℞. | Confect. sennæ<br>Confect. sulphuris<br>Confect. piperis, ää | ʒi | 30 |

M. Sig.: One teaspoonful at bedtime.

In cases of chronic constipation the following combination is of value:

| | | | |
|---|---|---|---|
| ℞. | Sodi sulph.<br>Potassii bitartratis<br>Syrupi zingiberis, ää<br>Infusi q. s. ad | ʒi<br>ʒi | 4<br>30 |

M. Sig.: To be taken at one dose on rising in the morning. Or:

| | | | |
|---|---|---|---|
| ℞. | Tinct. sennæ co.<br>Ext. cascaræ liq., ää<br>Sodii sulph.<br>Elix aromatici q. s. ad | m. xv<br>gr. xv<br>ʒss | 1<br>1<br>15 |

M. Sig.: This amount to be taken in a little water twice daily.

The following is a very good combination:

| | | | |
|---|---|---|---|
| ℞. | Potassii bitartratis<br>Pulv. glycyrrhizæ co | ʒii<br>ʒi | 8<br>30 |

M. Sig.: One teaspoonful at bedtime when necessary to correct constipation.

For children the following may be used:

℞ Syrupi sennæ
Syrupi rhei
Glycerini, āā ..... ℥i 4

M. Sig.: One to two teaspoonfuls at night when necessary.

In very young children and infants the following is of value:

℞ Syr. sennæ..... ℥i 30
Mannæ ..... ℥iv 15
Syr. aurantii q. s. ad..... ℥iii 90

M. Sig.: One teaspoonful at bedtime to correct constipation, or oftener if necessary.

### Neurasthenia.

Concerning the morbid anatomy of neurasthenia, Rankin, in *British Med. Journal*, states that some authorities attribute it to vasomotor inadequacy resulting from low blood pressure, the portal circulation becomes congested and the heart is imperfectly filled. Others mention its frequent association with Graves' disease, osteoarthritis and other diseases accompanied by low blood pressure.

Bouchard regards it as the result of abnormal fermentations in the stomach, with the consequent formation of toxins, which, when absorbed, impair the function of different organs, especially the nervous centers. Glenard believes that this condition is due to a visceroptosis.

The important symptoms are fatigue on slight exertion; impaired digestion, such as anorexia, eructations, restlessness, irritability, constipation; change of temperament, such as fickleness, restlessness; headaches, occipital or vertical, increased by stooping; unrefreshing sleep; sensory disturbances, such as neuralgic pains, muscular tremors, active deep reflexes; vasomotor phenomena, flushings, sweatings, palpitations, vertigo; photophobia, emaciation and various intellectual phenomena.

The first indication for treatment, therefore, is rest, both mental and physical. The patient should be separated from relatives, friends and business relations. The Weir Mitchell system is of great value in many cases, but this rigorous method of treatment should not be employed, according to Rankin, in all cases. In other words, this habit of treatment is very unfortunate and disappointing in many instances. The Weir Mitchell treatment is of value in those cases bordering on hysteria in which marked emaciation has taken place. The form of rest, then, should depend on the patient's individuality and his financial resources. A modified rest cure is more applicable in some cases by placing the patient in comfortable rooms under the care of a judicious nurse, and prohibiting all communication with relatives or business associates. The food must be regulated to suit the capacity of the digestive apparatus and should be generous. Milk and fats should be given as plentifully as possible. Regularity in meals, sleep and hours for resting should be observed. Absolute rest in bed should be the rule during the first ten days of the treatment, gradually replaced by walking in the afternoon. The patient may be allowed to read magazines, newspapers and other light literature, and may spend a part of his time in some artistic hobby. The point of weariness should never be reached.

Massage night and morning should be employed to improve the muscular system. Faradism is of value, particularly as a suggestive remedy.

Digestive disturbances often arise from unhygienic conditions of the mouth, consequently the teeth should be carefully inspected. An antiseptic mouth wash consisting of the following is recommended:

℞ Potassii chloratis
Acidi carbolici, āā..... gr. xl 2 | 65
Aquæ ..... ℥viii 240

M. To be used as a mouth wash.

Care should be given to the digestive tract. Antiseptics are recommended given combined with acids or alkalies, according to the indications in the individual case. To acid mixtures he advises adding carbolic acid in doses of two or three grains (.12-.20), and to alkaline mixtures sulpho-carbolate of soda in doses of from ten to fifteen grains (.65-1.00).

The bowels must be regulated so as to secure one good movement daily, and for this purpose he recommends the compound rhubarb powder of the United States Pharmacopeia, which is composed of the following:

℞ Pulv. rhei..... ℥vi 25
Magnesii oxidi..... ℥xvi 65
Zingiberis ..... ℥iiss 10

M. Sig.: One-half teaspoonful at bedtime.

On first waking in the morning, when the stomach is empty, from six to ten ounces of hot water should be sipped slowly; to this may be added a teaspoonful of Carlsbad salt if the rhubarb powder is not sufficiently effective. About once a week one grain (.06) of calomel may be added to the rhubarb. The diet must be carefully directed and at first should consist of milk foods, thin soups, fish, fowl and game; as the digestion improves the amount of food may be increased. The following outline of diet must be strictly adhered to: Red meat once a day only; cocoa with boiled milk; a moderate amount of sugar; no uncooked vegetables or fruit; stale or toasted bread; an abundance of fats and a minimum of two pints of milk in the twenty-four hours.

Cod-liver oil may be added to the diet as the patient improves. This is best taken in a single dose at night, on retiring, beginning with a few drops and doubling the dose each night until a maximum of a tablespoonful is reached. It is most easily taken in orange wine.

When insomnia is a stubborn factor, as may be the case in the early stages of the treatment, the author recommends the administration of small doses of some mild hypnotic at bedtime. In extreme cases it may be necessary to give morphin for one or two nights, but this should only be done when other means of inducing sleep have failed. Rankin properly emphasizes the importance of extreme care in the use of morphin so as not to create a habit. The patient should never know what drugs are being used.

If anemia is present it must be corrected. The following preparation is recommended for this purpose:

℞ Ferri et ammoniæ citratis..... gr. viiss | 50
Liquoris arsenicalis..... m. v | 30
Potassii bromidi..... gr. x | 65
Liquoris ammonii acetatis..... ℥i 4
Aquæ chloroformi q. s. ad..... ℥i 30

M. Sig.: One such dose after each meal.

Later in the course of the disease the author recommends a combination containing ichthyol, for both its antiseptic effect and its steadying influence on the vasomotor system, and cannabis indica to replace the bromid, consequently he advises the following combination:

℞ Ferri sulphatis..... gr. ii | 12
Ichthyoli ..... gr. v | 30
Acidi arsenosi..... gr. 1/40 | 005
Extracti cannabis ind..... gr. 1/4 | 015

M. Ft. capsula No. i. Sig.: One such capsule after each meal.

If iron in any form should disturb the digestion, it may be replaced by manganese oxid in from five to ten-grain doses (.30-.65). To relieve the headaches, if these are extreme, the following combination may be advised:

℞ Caffeinæ citratæ..... gr. iii | 20
Phenacetini ..... gr. x | 65

M. Ft. chart. No. i. Sig.: One powder when absolutely necessary to relieve the headache.

During these attacks of headache the tonic remedies should be temporarily omitted.

Spinal tenderness is usually speedily relieved by the application of a Pacquelin cautery along either side of the spine.

A movable kidney should be supported. A change of air and surroundings is always of benefit.

**Prophylaxis can be carried with great benefit to neurasthenics in the way of arranging business to avoid fatigue, in procuring abundant sleep, regularity of meals, and short but frequent intervals of complete relief from work and responsibilities.**

# Medicolegal

### Valuation Given to an Eye.

The Supreme Court of Wisconsin says, in Olwell vs. Skobis, an action brought to recover damages for an injury to one of the eyes of the plaintiff necessitating long and painful treatment, three operations thereon, and its removal, that, of course, there is no exact rule for estimating damages in such a case. In certain cases in other jurisdictions verdicts of from $2,000 to $5,000 for the loss of an eye have been held not to be excessive. In this case the jury assessed the damages suffered by the plaintiff, a woman amanuensis and bookkeeper, by the injury referred to, at $12,000; but this court is constrained to hold, for the purposes of a new trial of the case, that a verdict for more than $6,000 on substantially the same evidence as to damages as in this record would be deemed to be excessive.

### Insane Delusions and Testamentary Capacity.

The Supreme Court of Missouri, Division No. 2, says, in the case of Sayre and others vs. the trustees of Princeton University and others, a proceeding to contest the validity of the will of Dr. John S. Sayre, who died in 1899, that, to say that a belief of Dr. Sayre that he had appendicitis, if he so believed, was an insane delusion, was utterly groundless. He was disposed to leave it to the physicians, who decided to operate for appendicitis. Reliance on the judgment of distinguished medical specialists is in no sense an insane delusion. But if, in the light of all the evidence, the court could for a moment assume that Dr. Sayre was laboring under a delusion merely as to the name of the disease from which he was unquestionably suffering, and which finally caused his retirement from the Navy, it was obvious it did not show the slightest aberration with respect to the kind and extent of his property, or any false notions as to the objects of his bounty in the most remote degree. The fact that he gave the bulk of his estate to his alma mater, Princeton University, was no evidence of insanity. It was urged that the experts testified in response to a hypothetical question that Dr. Sayre was of unsound mind. The court, besides criticising the question, answers that medical men of great learning maintain that a mind diseased on one subject must be classed as unsound, but the law of Missouri is too well settled to be gainsaid that a man's mind may be impaired in one faculty and practically unimpaired in all others. Derangement of mental faculties does not incapacitate one under the laws of the state from making a will, if it does not render him unable to transact his ordinary business, and incapable of understanding the extent of his property and of appreciating the natural objects of his bounty.

### Complaints as Evidence—to Physician to Make Testimony.

The Supreme Court of Michigan says that the plaintiff in the personal injury case of O'Dea vs. Michigan Central Railroad Company testified fully as to her condition, pain and suffering, and its duration, and that this it was competent for her to do. In addition to her testimony, her counsel called a number of witnesses, who were allowed to testify to her complaints, not what she said in her own language (which the court does not imply would have been admissible), but the fact that she complained of this or that. She sent for a certain physician, not for the purpose of giving treatment, but because he was the company's physician at Owosso. She declined medical assistance at Henderson, saying she wanted to wait and send for the railroad physician in Owosso, so they could see if she was hurt, if they wanted to settle; that she had a claim against the company (for the injury), and wanted to get her proof together—wanted the railroad physician so that they would know that she was hurt. The physician was allowed to testify: "The patient complained of tenderness over the hip joint—that is, on pressure—and she also complained of some soreness in moving one shoulder." This testimony was not admissible. The plaintiff's own testimony showed that the witness was asked to call for the purpose of making testimony, and the fact that he did not come in response to the call, but for other reasons, was not important. It was the design of the plaintiff to make communications for the purpose of affecting her claim that made them inadmissible, for the reason that they were not natural expressions of present sufferings, but voluntary statements for an ulterior purpose, and therefore not within the exception to the hearsay rule. Again, the court says that it might be reasonably suggested that the plaintiff's attempt to make testimony for herself would not be likely to end with the physician, and such suggestion was a pertinent one to make to the jury, whose duty to consider the question of simulation was thereby emphasized.

### Typhoid Fever and Board of Health Powers.

The Supreme Court of Michigan says, in the case of Thomas vs. Board of Supervisors in Ingham County, that it appeared that, in September, 1904, the city council of the city of Mason, in Ingham County, acting as a board of health, employed Dr. Thomas to attend a typhoid fever patient in that city. He rendered the services required; his first visit being on September 8, and his last on October 10. His entire bill came to $36, which was reasonable in amount, and was approved and certified by the local board of health. But the board of supervisors of the county entirely disallowed the bill. This was done on the ground that typhoid fever was not, in their opinion, a "dangerous communicable disease," within the meaning of the statute. Thereon a mandamus was obtained from the circuit court requiring the board of supervisors to allow the bill. The circuit judge based his action on the theory that the amendment of 1903 of the law gives the board of supervisors no power to determine whetner a debatable disease does or does not come within the statute, and that the decision of the local board of health is yet final on that point.

The Supreme Court affirms the judgment of the lower court. It says that the board of health gets its power to act in these cases from section 4424 of the Compiled Laws of 1897, as amended by Act No. 7 of 1903. The provisions contained in this section, previous to the amendment of 1903, have been frequently construed by this court. It was held that, when the township board of health had acted, under the provisions of the section, its action was final, and the duty of the board of supervisors was to so treat it. By the amendment of 1903 the board of supervisors shall audit the bill, and if found that the expenses were necessarily incurred, the services actually and necessarily performed, and the amounts claimed for such expenses and services are severally just and reasonable under the circumstances, shall allow the same or such parts thereof as shall be deemed just and reasonable, and in auditing such accounts, the several boards of supervisors shall have full power to examine into the merits of all claims presented to them in accordance with the provisions herein contained. This court does not think that it was the purpose or effect of the amendment that the board of supervisors might substitute its judgment in place of the judgment of the board of health as to whether in a given case a person had a dangerous communicable disease.

The matter of the public health, the Supreme Court goes on to say, has been the subject of legislation for a great many years. Boards of public health have been created, and large powers given to them when the emergency arises for their exercise. These powers were curtailed in some respects by the amendment referred to, but it is just as much the duty of the board of health to act in case of an emergency now as it was before the amendment. When the board of health has acted in cases where it is its duty to act, and has filed the statement with the county clerk, as provided by the statute, it is the duty of the board of supervisors to proceed to audit the bill. The board of supervisors is not given the power to decide whether the disease with which the person was inflicted was a dangerous communicable one, but it is its duty to in good faith determine whether the expenses charged in the itemized statement were necessarily incurred, and whether the services for which charges were made were actually and necessarily performed, and whether the amounts claimed for such ex-

penses and services are severally just and reasonable. If it is determined they are, they should be allowed. The practical effect of a construction of the statute in harmony with the action of the board of supervisors in this instance would leave the board of health shorn of its powers. The court does not think that was the purpose or effect of the amendment.

## Current Medical Literature

### AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

#### American Medicine, Philadelphia.

*March 31.*

1 *Prophylaxis of Lobar Pneumonia. J. M. Anders, Philadelphia.
2 *Imperfect Descent of Testes. A. McLean, Detroit.
3 *Two Rare Forms of Cystitis. C. C. Norris, Philadelphia.
4 Study of the Conradi-Drigalski Medium for the Isolation of *B. Typhosus*. C. L. Cole, Washington, D. C.
5 *Pathology of Rabies; Rôle of Mast-cells in the Affection. A. Gordon, Philadelphia.
6 *The Training of Nurses. J. C. Munro, Boston.
7 The King's Evil and Its Cures. (Concluded). J. Knott, Dublin, Ireland.

1. **Prophylaxis of Lobar Pneumonia.**—Anders claims that thorough and prompt sterilization of pneumonic sputum, and of the secretions from the upper respiratory tract, and then their prompt destruction by burning, is a matter of first necessity. Disinfection of the bed linen and body linen, the mattress and the room occupied by the pneumonia patient is also a primary requisite. These matters do not receive the rigid care and attention which they richly merit by the average general practitioner. The public measures of greatest value are summarized as follows: The issuance of drastic edicts against spitting on the sidewalks; the work of street cleaning and street sprinkling should be looked after by bureaus or boards of public health, to whom should be given full executive authority; there should be greater diffusion of popular information concerning efficient ventilation of our office buildings, theaters, courts of justice, manufacturing establishments, churches, public schools, and passenger and street railway cars, and also regarding details connected with the subject of the prevention of lobar pneumonia, stating simple, plain facts about the way in which the disease is spreading.

2. **Imperfect Descent of Testes.**—McLean concludes from the study of a number of cases that, (1) in many cases of undescended testes there is an hereditary anatomic weakness of the sexual apparatus; (2) there is no way of telling before exposure whether the cord will allow of the transplantation of the organ to the scrotum or not; (3) an inch or more can be added to the vas by separating it from the epididymis and the globus minor from the body of the testis; (4) the spermatic artery may be severed and the vitality of the organ maintained.

3. **Cystitis.**—Norris reports two cases. In Case 1, a vesical calculus formed around a heavy silk suture. Two years previously the patient had had a suprapubic cystotomy performed for severe cystitis. This gave temporary relief. A few weeks later the patient passed a silk ligature covered with urinary salts. Following this the patient had symptoms of cystitis and occasional interruption of the stream of urine. Cystoscopic examination revealed a stone about the size of a pigeon's egg suspended from the superior aspect of the bladder. Vaginal cystotomy and removal of the stone was done. The wound healed rapidly and the patient was discharged cured four weeks after operation. Case 2 was one of exfoliative cystitis, the patient being a colored woman with no evidence of gonorrhea. Acute cystitis occurred with sudden onset. The symptoms for the first week were very severe. Three weeks later the urethra became blocked by a sloughing mass, which on removal proved to be an entire cast of the bladder, consisting of the mucosa and a portion of the muscularis. Symptoms from this time began to subside, and two months later the patient was entirely well. This case had no assignable cause. The uterus was in normal position, there were no neoplasms blocking the pelvis, nor was the patient pregnant. No strong chemical solution had been used in the bladder.

5. **Pathology of Rabies.**—Gordon concludes that the presence of mast cells corroborates his view that the spinal ganglions are the place of predilection for rabic virus.

6. **Training of Nurses.**—Munro emphasizes the following facts: Women who take up the profession of nursing should have a love for work, sacrifice and humanity, with all that these qualities imply. The probation period should be long enough to allow the unfit to be weeded out, and this latter process should be severe, judicial and searching. The strictly professional training given in our large hospitals is sufficient, and in many respects it is more than sufficient. Except in a small special class, nurses should be taught much less anatomy, physiology, pathology, bacteriology and chemistry. It would be far better, he states, if more time were devoted to teaching nurses to be genuinely humane. More time should be devoted to teaching nurses household work, cooking, ordering of supplies, cleaning of rooms, etc. The nurse should be taught that the family routine and habits are not formed on the basis of the training school, and that they should not be disturbed except for necessity. The nurse must realize that any honorable labor is within her duties, and that these duties can not always be drawn on hard and fast lines. In the hospital training they should be taught, next to the qualities of humanity and tact, all the little details that do not demand skilled knowledge in the abstract medical sciences, but do demand observation, common sense, tact and honesty. She should be less elaborately trained in the science of medicine. A few selected women should be trained for special work and advanced work, but such selection should be exercised with great care and judgment.

#### Boston Medical and Surgical Journal.

*March 29.*

8 The Value of Drugs in Therapeutics. F. C. Shattuck, Boston.
9 The Homeopathic Principle. F. B. Percy, Boston.
10 *An Inexpensive Mechanical Treatment for Anterior Metatarsalgia. E. B. Young, Boston.

10. **Mechanical Treatment for Anterior Metatarsalgia.**—Young is convinced that poor muscular development and improper shoes are very often the cause of pains complained of by women and which are referred to the pelvis, lower back and hips, and for which pelvic examination shows no adequate cause. Acting on this hypothesis Young devised means for overcoming the discomforts due to the breaking down of the transverse arch of the foot. A piece of sole leather of the thickness required is cut into the shape indicated in Figure 1. The edges are beveled and the leather is touched on one side with a few drops of liquid glue. It is then placed on the sole of the boot, to which it adheres, so that its pressure is exerted

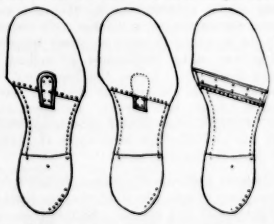

Diagram of different methods of applying support.

just behind the heads of the metatarsal bones, and the leather nailed in position. It can also be inserted under the sole (Fig. 2) by raising the posterior edge of the sole and nailing it again in place. If there is too much pressure the leather is pared to the requisite thickness, as indicated by the comfort of the wearer. The increased depth, at the point where the leather is inserted, raises the sole over this area and slightly beyond, whenever the patient steps—this in turn supporting the anterior arch. Still another means of accomplishing the same result, and one which is especially applicable to shoes which are to withstand severe wear, is shown in Figure 3. The leather strips raise all the metacarpals slightly, and, at the same time, by varying the angle at which it is placed on the

shoe, it may be made to aid in raising the inner side of a pronated foot. In mild cases this works exceedingly well. The proper slant and thickness are adjusted to the comfort of the patients as they stand on the leather strip. Naturally, suitable exercises should be carried out in every case.

### Medical Record, New York.

*March 31.*

11 *New Instrument for Measuring all the Diameters of the Pelvis in the Living Woman. S. D. Jacobson, New York.
12 *Treatment of Meningococcus Meningitis in the First Medical Division of Bellevue Hospital. E. L. Dow, New York.
13 *Two Unusual Epileptic Histories. S. E. Jelliffe, New York.
14 Operative Technic and After-Treatment for Mastoiditis with Epidural Complications. W. S. Bryant, New York.
15 *Ulcus Rodens (Mooren). H. H. Seabrook, New York.

11. **New Instrument for Measuring Female Pelvis.**—Jacobson describes an instrument, the use of which he advocates for the measurement of all the important diameters in the pelvis of the living woman. This instrument also enables the physician to determine the shape of the pelvis, and in the case of abnormalities, the available room for the passage of the child. It is constructed of steel and consists of two branches hinged together at one end and in the form of calipers. There is an outer semicircular branch and an internal irregularly S-shaped branch, each one being attached to a handle. A movable gauge slides on a grooved track and can be fixed in any part of this track by a set screw. The movable branch is attached to its handle by a pin and socket, and has a loop on each side, into which a sliding catch can be made to slip, which will securely hold the inner branch, whether it points toward or away from its fellow. The upper tips of the branches can be separated about twelve inches, the distance being indicated on the sliding gauge. A graduated leather belt accompanies the instrument. The fixed branch always remains outside of the body, while the other is used internally. The writer then gives detailed instructions for the employment of this instrument.

12. **Treatment of Meningococcus Meningitis.**—Dow declares that the only way the poisons or the bodies of meningococci can be nullified with our present knowledge is by assisting the patient to do it himself. Probably the best remedy for diminishing the intense cellular activity is the use of some derivative of opium. An accessory measure is the maintenance of a normal body surface temperature. This, by allowing the blood to remain at the surface of the body, relieves the congestion of the brain. The weather and the temperature of the ward appeared to have much to do with the progress of the cases which Dow has studied. The results were uniformly bad at the beginning of the epidemic during the cold months, and uniformly good during the warm months. An elevated posture was found to be beneficial in cases of severe tuberculous meningitis with extreme motor restlessness, as well as in cases of meningococcus meningitis. Ice to the head may be of some value. Lumbar puncture during the first few days of meningitis, or of its relapse, is of service. Laxatives and enemata are in order. Complications should receive appropriate treatment. Food, air and sunshine seem to be the only remedial measures of value in hydrocephalus.

13. **Two Unusual Epileptic Histories.**—Jelliffe's first patient was a girl ten years of age, who until she was eighteen months old, was perfectly well and normal. At this time otitis media developed, a moderate purulent discharge from the ear beginning on the second day. In a few days, the pain and local symptoms subsiding, the child was taken out of bed. It was found at this time that she was paralyzed on the left side, and later epileptic phenomena developed. The general condition of this child has greatly improved, including a gain in weight of twenty-five pounds. She is mentally unchanged, being as bright as the average child of her age. About a year and a half ago examination showed a small cicatrix on the right drum membrane. Jelliffe thinks it not improbable that the otitis was followed by the development of an abscess, the paralysis and epileptic phenomena being due to pressure or partial destruction. He believes also that the recovery, if such it proves to be, may be attributed to the rupture of a scondary cyst and the relief of pressure. The second patient had always had fair general health until an attack of santonin poisoning. This accident offers a plausible explanation of the convulsive seizures, the amblyopia and the nephritis which followed. The author states that the relation of santonin to naphthalene suggests the type of pathologic change that occurred in this child's nervous tissues. He has little doubt that the seizures from which this child suffered were distinctly epileptic.

15. **Ulcus Rodens.**—Seabrook describes a patient, a perfectly healthy man, thirty-seven years old, with rodent ulcer of over eighteen months' standing. All the cornea except a small patch outward had been involved. Treatment of various sorts failed. At this point pure carbolic acid seemed to check it, except for occasional relapses at the upper part of the ulcer, for several months, when the anterior layers of the cornea began to break down along the whole edge of the ulcer, except that directed toward the corneal limbus. Carbolic acid shortened the attacks and ameliorated the symptoms. Gray lines extended from the point of application into the lymph channels of the cornea.

### St. Louis Medical Review.

*March 24.*

16 *Cases of Infantile Scurvy. J. A. Coutts, London, Eng.
17 *Local Anesthesia in Operations. T. C. Witherspoon, St. Louis.

*March 31.*

18 Physiology of the Nerves of the Tractus Genitalis. B. Robinson, Chicago.
19 Removal of the Uterus for Certain Chronic Inflammations. T. C. Witherspoon, St. Louis.
20 Surgical Treatment of So-called Idiopathic Dilatation of the Stomach. C. A. L. Reed, Cincinnati.

16. **Infantile Scurvy.**—Two cases of infantile scurvy complicated by extensive sub-periosteal hemorrhages are reported by Coutts. The first patient was aged eight months. The lower end of the right femur was thickened and the swelling was evidently painful to touch. There were no cutaneous hemorrhages and no history suggestive of hemorrhage into any of the viscera. The patient died. Surrounding the femur, almost its entire length, was a layer of bone formed in the detached periosteum, the space between the bone and periosteum being filled by a blood clot. In the case of the second patient both thighs were swollen and tense and there was evidence of sub-periosteal hemorrhages in both the legs and the arms. Both the lower and upper epiphyses of the femora were detached, and each shaft lay free in a cavity formed by blood clot and blood-soddened muscles. Instead of bone having formed in the detached periosteum that membrane had undergone a process of necrosis and no trace of it was discoverable in either limb.

17. **Local Anesthesia.**—During the year 1903, 105 patients were operated on by Witherspoon under local anesthesia produced by eucain in one-tenth per cent. solution with good results. When an operation requires much time in its performance and necessitates a good deal of handling of tissue, Witherspoon gives the patient an injection of morphin and atropin before beginning the operation. The area of infiltration of the skin should be made directly in the line of the proposed incision and should be long enough to allow of easy exposure of the tissue beneath. When the operation is to extend into the deep tissues it is best to infiltrate step by step and not to attempt to infiltrate the whole tissue at once. Among the operations performed under this anesthesia were partial thyroidectomies for exophthalmic goiter; ligation of arteries; radical operations for malignant disease of the breast; gastrostomies; gallstone operations; appendectomies; renal decapsulation; nephrectomy; nephrotomy; hysteropexies; myomectomies; radical inguinal and umbilical herniotomies; perineal cystotomies and operations for hallux valgus.

### New York Medical Journal,

*March 31.*

21 *Scopolamin-Morphin-Chloroform Anesthesia. H. J. Whitacre, Cincinnati.
22 *General Infections Through the Tonsil. I. Adler, New York.
23 *Prognosis of Postoperative Femoral Phlebitis. B. R. Schenck, Detroit.
24 *Case of Conjugate Lateral Deviation to the Left. J. H. Claiborne, New York.
25 Gynecologic and Obstetric Cases. F. C. Hammond, Philadelphia.
26 The Passing of the Nursing Mother. G. D. Scott, New York.
27 Myelitis Complicating Pregnancy. J. T. Schell, Philadelphia.

28 Mastoiditis and Sigmoid Sinus Thrombosis in an Infant. S. Oppenheimer, New York.
29 Chemical Composition of Medicinal Plants. E. C. Hill, Denver.
30 Insanitary Condition of Various Towns in the Colony of Angola. F. C. Wellman, Angola, W. Africa.

21. **Scopolamin-Morphin-Chloroform Anesthesia.**—The danger of this anesthesia led Whitacre to institute animal experiments for the study of this question. Fatty degeneration followed regularly the prolonged administration of both chloroform and ether, the liver being the organ involved when chloroform was used, and the kidney when ether was used. Ten animals were given repeated doses of scopolamin 0.01 grain for from eight to fourteen days. Most of these animals showed degenerated changes in some degree, and five showed distinct fatty degeneration of the liver and kidney; two a probable fatty degeneration of the heart. Ten animals were given scopolamin, 0.01 grain, and morphin one-sixth grain, for corresponding periods of time. Five animals showed fatty degeneration of the kidney and of the liver. Whitacre concludes that scopolamin-morphin narcosis is not devoid of danger, and that the use of these agents alone is not justifiable or practicable. However, a single dose given two hours before operations lessens the discomforts attendant on the operation.

22. **General Infection Through the Tonsil.**—Adler emphasizes a few points of practical interest. He says that whenever there is a tendency to attacks of follicular tonsillitis, even if only very mild, be the attacks ever so slight, be the tonsil ever so large, there is a serious menace to the system, and the tonsil should be put out of harm's way. Adler advises burning over the surface of the tonsil either with a broad Paquelin burner or with the galvano-cautery. He thinks the best results were obtained when the entire surface of the tonsil down to a considerable depth is destroyed and converted into scar tissue, thus rendering it impermeable to further infection.

23. **Postoperative Femoral Phlebitis.**—The 48 cases reviewed by Schenck occurred among 7,130 patients operated on. The date of onset was markedly constant. The earliest was on the sixth and the latest on the twenty-second day, while in 25 instances it was between the twelfth and sixteenth day, and in all but 4, after the tenth day. Pain, of a dull throbbing character, sometimes in the thigh, often in the calf of the leg or in the popliteal space, and tenderness along the vein were observed in all cases. Tender, enlarged glands were present in only six instances. Edema occurred in 38 per cent. of the cases. The observation of Singer, that the pulse curve, as related to the temperature curve, is higher than that usual in other conditions, was not confirmed. These 48 cases occurred after: perineal operation alone, 4; hysteromyomectomy and myomectomy, 19; ovarian cysts, 9; hysterectomy for carcinoma, 5; suspension of the uterus, 3; suspension of the uterus, with repair of the perineum, 4; hysterectomy for pelvic inflammatory disease, 1; miscellaneous operations, 3. In about 60 per cent. of all cases there is never complete freedom from attacks of pain and swelling. If the symptoms persist longer than six months there is small chance that they will ever disappear.

24. **Conjugate Lateral Deviation.**—The salient features of the case reported by Claiborne were the following: Conjugate lateral paralysis, with deviation to the left; fugacious left hemianesthesia and hemiplegia; the location, by exclusion of the lesion, at the nucleus of the right sixth nerve; the absence of hemianopsia; the obvious predominance of the paralysis of the external rectus, as opposed to the internal rectus, and the retention of normal convergence.

### Lancet-Clinic, Cincinnati.

*March 31.*

31 Clinical Significance of Some Symptoms of Diseases of the Stomach. J. H. Schroeder, Cincinnati.
32 Nervous Disorders of Children—Their Relation to School Life and Work. J. Punton, Kansas City.
33 Smallpox Contagion. M. L. Heidingsfeld, Cincinnati.

### Annals of Surgery, Philadelphia.

*February.*

34 Surgical Intervention in Tuberculosis of the Meninges and of the Brain. R. Alessandri, Rome.
35 Elastic Ligature and the Ligature Method. D. Tait, San Francisco.
36 *Reversal of the Circulation in a Limb. A. Carrel and C. C. Guthrie, Chicago.
37 Carcinomatous Metastases Developing Over Three Years After Removal of the Breast Without Local Recurrence. B. F. Curtis, New York.
38 *Cardiospasm. J. F. Erdmann, New York.
39 *Treatment of Diffuse Septic Peritonitis. R. G. LeConte, Philadelphia.
40 *Extroversion of the Bladder. B. G. A. Moynihan, Leeds, Eng.
41 Two Cases of Rupture of the Bladder. J. Marnoch, Aberdeen.
42 Loose Bodies in the Knee Joint. F. G. Connell, Salida, Colo.
43 *An External Metal Support for Direct Application to the Shaft of a Fractured Long Bone. W. Bartlett, St. Louis.
44 Use of Wolfe Grafts and Tendon-Lengthening in Treating Cicatricial Contractures. C. N. Dowd, New York.
45 Fractures of the Metacarpal Bones. R. Russ, San Francisco.
46 Fracture of the Astragalus with Sub-astragaloid Forward Dislocation of the Foot. C. O. Thienhaus, Milwaukee.

36. **Reversal of Circulation.**—Experiments were undertaken by Carrel and Guthrie with the view of studying the changes of the circulation of a limb after reversal, and of finding a method of preventing gangrene when the arteries of the limb become unable to carry the red blood to the capillaries. The experiments performed demonstrated that the reversal of the circulation in the limb of a dog can be established by an end-to-end arterio-venous anastomosis. At first the valves prevent the reversion of the circulation in the veins, but after a short time the valves gradually give way and the red blood flows through the veins as far as the capillaries. Finally it passes through the capillaries and the arteries are filled with dark blood. Practically complete reversal of the circulation is established in about three hours after the operation. Under the same conditions lateral anastomosis does not establish the reversal of the circulation.

38. **Cardiospasm.**—Twenty months have elapsed since the operation in the case reported by Erdmann. The patient, a female, aged 33, first noticed a peculiar swallowing rattle in throat, which in four or six weeks was followed by difficulty in swallowing foods, giving her an impression of pressure back of the the lower portion of the sternum. All things seem to go down the wrong way. There was invariably, after a short period, vomiting of the material swallowed, varying in extent from the entire quantity to about two-thirds of that swallowed. All palliative measures failing to give relief, Erdmann operated. The stomach was exposed through a median epigastric incision and was found lying in an absolutely transverse position and contracted so that it was less in diameter than the large intestine. It was impossible to introduce the finger through the contracted cardiac opening. The lower end of the esophagus formed a large pouch. The contracted opening was stretched with the fingers, passed in through an incision made in the long axis of the stomach, from 4 to 6 c.m. The opening in the stomach was closed by three rows of sutures, the first and second being continuous chain stitch and the third Lembert. The patient made an excellent recovery.

39. **Treatment of Diffuse Septic Peritonitis.**—LeConte outlines the treatment employed by J. B. Murphy and reports the history of two patients treated successfully according to this method.

40. **Extroversion of the Bladder.**—Moynihan cites the case of a youth, aged 19, who fifteen years before that had a plastic operation performed for extroversion of the bladder, which was not successful. The patient was given relief by transplantation of the bladder into the rectum. The bladder was isolated, leaving only at its pedicle the two ureters. As much tissue was left as possible round each ureter so as to avoid the possibility of damage, either to the ureter itself or to its vessels. The serous covering was then stripped upward from the front of the rectum until 4 or 5 inches of the bowel lay exposed at the bottom of the wound. Along its anterior surface an incision about 3½ inches in length was made. Into this opening the bladder was placed, being turned upside down so that its former anteror surface became posterior, and its former lower end became the upper. The ureters instead of passing forward to the bladder passed backward, and the catheters passed into the rectum and out at the anus. The edge of the bladder and the cut edges of the rectum were sutured together by two Lembert sutures that were continuous, one taking the right side and the other the left. A few additional interrupted sutures were necessary here and there. The wound was dried and the skin edges along the original

median incision were drawn together. At the upper end the edges came well into apposition, but about an inch at the lower part had to be left open. The catheters which had been introduced into the ureters now passed out of the anus; the sphincter had previously been stretched. The operation lasted an hour and a half. The after progress of the case was satisfactory.

43. **External Metal Support for Fractured Long Bone.**—Bartlett reports a case of extensive injury of the arm necessitating resection of two inches of the humerus. Four days after the injury the patient commenced to suffer great pain in the injured arm and this persisted until the ninth day, when the parts were placed at rest in the following manner: With the arm flexed at the elbow, Bartlett applied a plaster bandage, which included the chest, forearm and hand, the upper arm being left free, of necessity. A steel arch anchored at one end in the plaster enclosing the chest, and at its other in the bandage around the forearm, was suspended just above the upper arm. Beneath this arch was placed a vertical rod, which had attached to its lower extremity a silver splint which rode on the ends of the bone like a saddle on a horse, and prevented their natural tendency to rise up out of the wound, while an extension of the vertical rod fitted between the ends of bone, thus keeping the apparatus from gliding toward shoulder or elbow. Under the influence of this direct splint, however, the free bony ends showed a tendency to point downward and to project through the gap on the posterior surface of the arm. Hence, five days later, a silver wire was passed under each extremity and carried out through the anterior wound, to be attached to the steel arch above. After this was done the humerus remained absolutely rigid, there was no difficulty in dressing the large anterior wound by stuffing gauze in around the rod and the wires, the patient was occasioned absolutely no inconvenience by the apparatus, and except for tightening the wires as they stretched, the appliance caused no concern during all the weeks that it remained in place. It is worthy of note that there was no more spontaneous pain after the application of the splint.

### Pennsylvania Medical Journal, Athens.

*March.*

47 *Address in Otology. M. V. Ball, Warren.
48 *Teaching the Deaf Child to Hear. G. Hudson-Makuen, Philadelphia.
49 *Restitution to the Normal After Labor. B. C. Hirst, Philadelphia.
50 *Submucous Resection of the Septum Illustrated. W. L. Ballenger, Chicago.

47.—See abstract in THE JOURNAL, Oct. 21, 1905, page 1271.

48. Id.—Oct. 28, 1905, page 1349.

49. Id.—Nov. 4, 1905, page 1437.

50. **Submucous Resection of Septum.**—An illustrative discussion of the submucous resection of the nasal septum is presented by Ballenger, with a complete description of all the instruments employed, including his swivel-knife and a forceps for fracturing the deformed vomer from its attachment to the superior maxilla. His method of operating is so well-known that it is not necessary to describe it at this time. It shortens the three major steps of the operation, lessens the shock and shortens the time required for performing the operation. The operation has been employed successfully in more than 100 cases. Ballenger presents the following axioms: 1. Never do a long operation when a short one will do as well. 2. Make haste slowly in starting the elevation of the mucoperichondrium. Any other manner of haste is liable to result in a permanent perforation. 3. Do not extend the Killian incision through both mucous membranes, as to do so is tempting Providence in the form of a perforation. 4. A few instruments, infrequently introduced between the membranes, should be the aim. 5. Don't "fish" for what you want, but look, see, feel, comprehend, then remove what you want. "Fishing" in the cavity is liable to tear the mucosa. 6. A sharp-pointed instrument in a cavity is a dangerous thing. A dull one is safer. 7. The mucoperichondrium is easily and quickly lifted with a blunt elevator in 95 per cent. of all cases. 8. The external ridge of the nose needs support, hence, leave plenty of cartilage in this region, for this purpose. 9. Never make a move until you know what you are doing. Then do it. 10. Do not operate to straighten the septum, but rather to remove obstructive adhesions of the septum. 11. Operate with a view to the patient's comfort and permanent relief. That is for what he employs you.

### Therapeutic Gazette, Detroit, Mich.

*March 15.*

51 *Treatment of Hemorrhoids. C. B. Kelsey, New York, L. H. Adler, Jr., Philadelphia; B. M. Ricketts, Cincinnati, H. M. Bishop, Los Angeles; S. G. Gant, J. P. Tuttle, New York, and T. C. Martin, Cleveland.
52 *Exophthalmic Goiter Treated by the Roentgen Rays. G. E. Pfahler and M. C. Thrush, Philadelphia.

51. **Treatment of Hemorrhoids.**—The two operations referred to by Kelsey are the Allingham ligature operation and his own clamp operation, either of which, in selected cases in which no stretching of the sphincter is necessary to reach the tumors, may be performed under local instead of general anesthesia. For purposes of local anesthesia Kelsey does not believe in the use of simple water injections. He describes an operation which he has employed with success for about ten years. It is done without dilatation and by means of a speculum, and under eucain anesthesia in the office. From ten to fifteen minims of a weak eucain solution is first deposited in the most prominent part of the tumor, and after a few minutes a platinum wire heated to the point of redness is plunged fairly into the substance of the tumor. The source of electricity is the street current, and the needles used are those generally employed in nose and throat work. One or at most two applications are enough at one time, and these should not be made oftener than twice a week at first. The time consumed by the method in an ordinary case is usually several weeks.

Adler prefers the cautery method for the radical cure of internal hemorrhoids and excision for external hemorrhoid. For the treatment of the large single or large multiple pile, Ricketts prefers the submucous ligature operation, but for the treatment of a small single pile other methods are urged. Bishop still favors the operation which he devised and published about twelve years ago. Gant repeats his now well-known views on sterile water anesthesia in the operative treatment of internal hemorrhoids. He prefers the ligature operation for the removal of internal hemorrhoids in the office, at the patient's home, or in the hospital where sterile water or other local anesthetic is employed. Tuttle claims that in office practice the operative treatment of hemorrhoids resolves itself into excision with suturing of the edges or ligature with or without transfixation. The ligature is the easiest and quickest of application, and in most cases it is eminently satisfactory. He says that it is no longer necessary for patients to suffer from hemorrhoids on account of the fear of the general anesthetic or of the hospital. Most of them can be cured in the office or at home, and without taking ether; but success in this method requires proper office equipment, careful attention to aseptic details and skill in the art of local anesthesia. According to Martin, the ligature operation is an antiquity undeserving of a place except in the archives of proctology. He advises clamping the hemorrhoid, cutting it away, applying the cautery intermittently only to coagulate the lymph to plug the blood vessels without accidentally destroying normal tissue, and then suturing the pedicle with catgut by means of the lock or buttonhole stitch. He describes his method in detail.

52.—See abstract in THE JOURNAL, March 31, 1906, page 983.

### Interstate Medical Journal, St. Louis, Mo.

*March.*

53 *Desert Thirst as a Disease. W. J. McGee, St. Louis.
54 Should Education in Sexual Matters be Given to Young Men of the Working Classes? L. D. Bulkley, New York.
55 Education in Sexual Hygiene for Young Working Women. M. A. Cleaves, New York.
56 Secondary Epithelioma of the Axillary Nodes with Involvement of a Large Nerve. H. G. Mudd and G. McConnell, St. Louis.

53. **Desert Thirst.**—McGee cites a most extraordinary case. A man named Pablo was lost in the desert just eight days (and nights), with one day's water; he rode in the saddle thirty-five miles and walked or crept between 100 and 150

miles. For nearly seven days, or fully 160 consecutive hours, he was wholly without water from sources exterior to his system, save the few drops extracted from the agave stipes and insects—a desert record without parallel known to McGee; for half the victims of desert thirst die within 36 hours of deprivation, another quarter within 48 or 50 hours, and nearly all known to survivors, within from 70 to 80 hours (three days and nights), or hardly half of Pablo's stress. For some five days he consumed his urine; ordinarily, the reconversion of excreted liquids is hardly helpful if not wholly harmful, yet in Pablo's case it seems to have materially prolonged vitality. For nearly nine days his bowels were inactive, and for two days his kidneys failed to function. The eight-day siege lost him 35 or 40 pounds (or 25 per cent. of his weight), chiefly through evaporation from skin and membrane; he also suffered fully two-score cuts, scratches and bruises each of sufficient severity to give some shock to the system; and his mouth, esophagus and stomach were seriously deranged by his desperate efforts to relieve the thirst torture. The most striking feature of the case was the absence of wholly insane delirium; he was, indeed, affected by the revulsion against gold, as shown by the abandonment of his nuggets and the casting away of his money; he was possessed of hallucinations as to the wetness of sands, the moisture of articulates and shrubs, and the nearness of Tinajas Atlas; he was obsessed by the desire for vengeance against his comrade, who he thought had deserted him, the dream of casting himself in Tule Well, and the delusion of death—yet he never lost his trail sense, and apparently squandered little vitality in those aimless movements that commonly hasten and harden the end of the thirst victim.

### Washington Medical Annals.

*March.*

57 *An Attempt to Explain the Peritoneal Adhesions that So Frequently Precede Typhlitis and Appendicitis. A. F. A. King, Washington, D. C.
58 Tuberculosis of Kidney, Nephrectomy, E. M. Hasbrouck, Washington, D. C.
59 Papilloma of the Rectum; Operation. D. G. Lewis, Washington, D. C.
60 Epithelioma Removed from Prepuce of Clitoris. T. C. Smith, Washington, D. C.
61 Alcoholic Hypertrophic Cirrhosis of Liver and Kidneys. D. S. Lamb, Washington, D. C.
62 Fibromyoma of Round Ligament; Operation. D. G. Lewis, Washington, D. C.
63 *A New Ophthalmotrope. D. K. Shute, Washington, D. C.
64 Renal Calculus, Removed by Nephrolithotomy. E. M. Hasbrouck, Washington, D. C.
65 *Case of Double Appendix. E. C. Prentiss, Washington, D. C.
66 *Adrenalin Chlorid in Variola. E. Eliot, Washington, D. C.
67 One-day Pneumonia in a Child. L. B. T. Johnson, Washington, D. C.
68 Surgical Treatment of Typhoid Fever. G. T. Vaughan, Washington, D. C.
69 Contracted Gall Bladder Removed by Operation. W. A. Jack, Jr., Washington, D. C.
70 Protozoal Human Parasites. C. W. Stiles.

57. **Peritoneal Adhesions.**—According to King, peritoneal adhesions about the cecum and appendix are not necessarily of inflammatory origin, as is generally supposed, but are evolutionary processes of adaptation. The adhesions are probably produced by abnormal immobility of the parts consequent on lack of thigh pressure on the abdomen such as occurs in the natural conquiniscent posture during defecation. Such adhesions having occurred, the peristaltic function of the cecum is impaired, with resulting constipation, retention of toxic matter in the intestine, and infection of the appendix. When the adhesions are suddenly, violently and repeatedly stretched, lacerated or otherwise traumatically disturbed by the muscular strains incident to bicycling, polo, tennis and similar exercises, peritonitis, typhilitis and appendicitis are produced. To prevent this "sea of troubles" civilized man must secure to the peritoneal surfaces their daily normal movement, by reverting to the natural conquiniscent posture of his ancestors in defecation.

63. **New Ophthalmotrope.**—The instrument devised by Shute demonstrates the conformity of the tilted axis hypothesis with clinical observations in ocular palsies. The model consists of a somewhat narrow rectangular box open at the top and at either extremity (20 cm. long, 10 cm. wide and 5 cm. high). The sides of the box support movable, clamp-arms carrying perpendicular adjustable supporting rods which are for the purpose of receiving and keeping in a fixed position the extremities of a stout steel hatpin passed through an india-rubber ball. The hatpin represents an innervation-axis (physiologic axis) of the eyeball, the rubber ball, of course, representing the eyeball. This ball is about 8 cm. in diameter. At one place it is painted to represent the cornea. Passing through the center of the cornea to its horizontal and vertical limits (of course at right angles to each other) are arcs of the horizontal and vertical meridians (great circles) of the ball. At the posterior pole of the ball representing the fovea centralis two other arcs are drawn at right angles to each other like those on the cornea. They are segments of the horizontal and vertical meridians. In the proper quadrants of these spherical right triangles at the posterior or macular pole of the ball, are drawn in red ink three arrows and in black ink one arrow. This is for the purpose of studying the character of the diplopia and represents the eyeball under the influence of the resultant of all the remaining tensions of the eyeball, the sound eye being imagined in the straightforward primary position. This rubber ball representing the paralytic right eyeball is depicted with a tilted axis. The adjustable placing cup holds the rubber representative of the eyeball in the correct primary position until the hatpin is securely supported, then it is lowered and removed. The corneal gauge is a support carrying an adjustable upright which is surmounted by a ring for receiving a movable watch crystal. The crystal is marked with a horizontal and a vertical line, intersecting at its center. When the rubber ball is in the correct position over the box and its hatpin axis is properly secured by the supporting rods, the corneal gauge is placed in the box in front of and quite close to the rubber ball, and is so adjusted as to have the horizontal and vertical lines of the watch crystal in the planes of the corresponding horizontal and vertical meridians of the cornea. Any displacement of the center of the cornea in consequence of rotation of the rubber ball on its steel axis can readily be noted and its character studied. By placing the proper marks of identification for puncture and counter-puncture with a hatpin, the same rubber can be used for study of ocular palsies of all the extrinsic muscles and, therefore, pathologic rotations on axes out of Listing's plane. Also physiologic movements on axes in Listing's plane can easily be studied. The model has a second corneal gauge for studying the movements of the posterior or macular pole as well as the anterior or corneal pole.

65. **Double Appendix.**—Prentiss describes a vermiform appendix which has a double lumen. There was a very thin layer of connective tissue between the lumina and they are held firmly together by peritoneum. He considers the specimen a partial reversion to a lower type.

66. **Adrenalin Chlorid in Variola.**—Eliot used adrenalin chlorid in a 1 to 1,000 solution in four cases of hemorrhagic smallpox; two were distinctly confluent, one was of the discrete variety, and the fourth was not classified, as it was so rapidly fatal. Three patients died and one was still under treatment on the day of writing. In the first two cases the effect of the adrenalin was to check the effusion of blood into the skin and into the points of eruption, but large bladders formed on different portions of the body, notably on the legs; the skin assumed a wrinkled appearance and peeled off when pressure was made on any part of the body, as in lifting the patient. In the third case, in which larger doses were given, every point of eruption on the body necrosed; some points were arrested superficially, while others, principally those on the thighs and legs, became deep sloughs of greater or less size, and the toes of each foot became gangrenous. Each point of sloughing was surrounded by an elevated broad border of pus, a distinct line of demarcation.

### Philippine Journal of Science, Manila.

*January.*

71 Water Relations of the Coconut Palm (Cocos Nucifera).—The Oil Produced from the Nuts—The Factors Entering into the Rancidity of the Oil, and the Insects Attacking the Trees. P. C Freer.
72 Water Relations of the Coconut Palm (Cocos Nucifera). E. B. Copeland.

73 Coconut and Its Relation to the Production of Coconut Oil. H. S. Walker.
74 Occurrence of Schistosoma Japonicum Vel Cattoi in the Philippine Islands. P. G. Woolley.
75 Study of Some Tropical Ulcerations of the Skin, with Particular Reference to their Etiology. R. P. Strong.

### Archives of Otology, New York.

*February.*

76 Acute Middle-Ear Suppuration, Complicated by Labyrinthine Fistula and Paralysis of the Abducens Nerve. H. Hastings, Los Angeles.
77 Serous Meningitis. A. Knapp.
78 Relations in the Blood Supply of the Inner Ear Which Have a Practical Bearing on the Clinical Study of Otology. G. E. Shambaugh, Chicago.
79 Infective Sinus Thrombosis. P. D. Kerrison, New York.

### Annals of Gynecology and Pediatry, Boston.

*February.*

80 Forceps Version and Craniotomy. G. L. Broadhead, New York.
81 Constitutional Low Arterial Tension in Children. L. F. Bishop, New York.

### Buffalo Medical Journal.

*February.*

82 The Nature and Methods of Medical Societies. C. G. Stockton, Buffalo.
83 The Question of General or Local Anesthesia. E. S. Vanduyn, Syracuse.
84 Cholecystitis. D. Rochester, Buffalo.
85 Some Surgical Accidents of Childbirth. W. E. Ford, Utica.

### Columbus Medical Journal.

*February.*

86 Medical Education. S. Loving, Columbus.
87 Advantages and Purposes of a State Organization of Medical Teachers. J. U. Barnhill, Wooster.
88 Should Advanced Standing as Regards Medical Residence Be Given to Graduates of Literary Colleges, or Should Four Years of Medical Residence Be Invariably Required. A. Ravogli, Cincinnati.
89 What Subjects and How Much Work in Each Should Be Required of a Graduate of a Literary College to Gain One Year's Advanced Standing in the Medical Colleges of Ohio. F. C. Waite, Cleveland.
90 Malignant Colon; Umbilical Hernia; Esophageal Stricture. F. Fletcher, Columbus.

### American Practitioner and News, Louisville, Ky.

*March.*

91 The Colon—A Strategic Point in Medicine. D. S. Wilson, Louisville.
92 Primary-Secondary Syphilis. H. C. Weber, Louisville.
93 Treatment of Tuberculous Fistula in Ano. E. O. Witherspoon, Louisville.

### Louisville Monthly Journal of Medicine and Surgery.

*March.*

94 Course of the Facial Nerve Through the Petrous Bone and the Significance of Its Injury. A. O. Pfingst, Louisville.
95 Chronic Suppuration of the Middle Ear. J. M. Ray, Louisville.
96 Doctors and Doctors. D. L. Field, Jeffersonville, Ind.
97 The Woman After Labor. W. B. Doherty, Louisville.

### Albany Medical Annals.

*March.*

98 The Plea of the Patient. G. Cleveland.
99 The State and the Doctor. St. C. McKelway, New York.
100 President's Address Before the Medical Society of the State of New York. J. D. Bryant, New York.
101 History of Medicine in the State of New York in the Last Hundred Years. S. B. Ward, New York.

### Journal of Mental Pathology, New York.

Vol. VII, No. 4.

102 Reflex and Automatic Excitability. S. Sergi, Rome, Italy.
103 Neurasthenia and Neuro-Hyperasthenia of Grocco. P. Timpano.
104 Electric Sleep. Experimental Study with Electric Current of Low Tension. L. G. Robinovitch, Paris.

### American Journal of Urology, New York.

*March.*

105 Nephrolithiasis. R. Guiteras, New York.
106 Ureteral Catheterism in Nephrolithiasis. F. Bierhoff, New York.
107 Microscopic Urinalysis in Nephrolithiasis. L. Heitzmann, New York.
108 Gynecologic Conditions Simulating Nephrolithiasis. A. H. Goelet, New York.
109 Nephrolithotomy from the Standpoint of the Provincial Surgeon. O. C. Smith, Hartford, Conn.
110 Mortality in Operations for Renal Calculus. H. Cabot, Boston.
111 Renal Calculus. E. Garceau, Boston.

### Journal Missouri State Medical Association, St. Louis.

*March.*

112 Mistakes in the Diagnosis of Appendicitis. H. C. Dalton, St. Louis.
113 Uterovaginal Fixation for the Relief of Extensive Uterine Prolapse at or Near the Menopause. F. J. Taussig, St. Louis.
114 Statistics Relative to Lobar Pneumonia and Its Complications. J. Wilson, Kansas City.
115 Etiology and Morbid Histology of Lobar Pneumonia. F. E. Murphy, Kansas City.
116 Diagnosis of Lobar Pneumonia. H. D. Jerowitz, Kansas City.
117 Prognosis of Lobar Pneumonia. E. W. Schauffler, Kansas City.
118 Treatment of Lobar Pneumonia. B. H. Wheeler, Kansas City.
119 Case of So-called Fetal Ichthyosis. B. W. Moore and L. Warfield, St. Louis.
120 Eight Selected Cases, Representing Two Phases of Gallstone Disease. W. Bartlett, St. Louis.
121 Use and Abuse of Massage in the Treatment of Rheumatism. T. N. Bogart, Excelsior Springs.

### Bulletin Johns Hopkins Hospital, Baltimore.

*March.*

122 *Pernicious Vomiting of Pregnancy. J. W. Williams, Baltimore.

122.—See abstract in THE JOURNAL, June 17, 1905, page 1956.

### Indiana Medical Journal, Indianapolis.

*March.*

123 Self-Regulation of the Living Organism. G. Bell, Indianapolis.
124 Steamboat Service of the Mississippi River During the Civil War. W. E. Jeffries, Indianapolis.
125 Personal Army Experiences. W. H. Wishard, Indianapolis.
126 American Tuberculosis Exhibition. J. N. Hurty, Indianapolis.

### Medical Standard, Chicago.

*March.*

127 When Shall We Operate on Fibroid Tumors of the Uterus? G. W. Newton, Chicago.
128 Advantages of an X-Ray Picture in Every Case of Dislocation or Fracture. N. M. Eberhart, Chicago.
129 Legal Medicine. E. E. Clark, Danville.

### Virginia Medical Semi-Monthly, Richmond.

*March 9.*

130 Gastric Lavage. W. B. Foster, Richmond.
131 Case of Gastroduodenostomy. J. S. Horsley, Richmond.
132 Mental Therapeutics. H. A. Robbins, Washington, D. C.
133 Syphilis. R. A. Gamble, Petersburg.
134 Principles of Surgery. S. McGuire, Richmond.

## FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

### British Medical Journal.

*March 17.*

1 Position of Pathology with Regard to Clinical Diagnosis. A. W. M. Robson.
2 *Physiologic Notes on the Cancer Problems. W. Wade.
3 *Transmissibility of Syphilis to Apes. A. S. Grünbaum and R. D. Smedley.
4 *Anesthetics and Renal Activity. W. H. Thompson.
5 *Experiments in Density of Chloroform. P. M. Chapman.
6 *Ethyl Chlorid as a General Anesthetic. W. J. McCardle.
7 *Ethyl Chlorid. H. A. Knight.

2. **The Cancer Problem.**—Wade submits that there is good reason to suspect that the origin of cancer may be connected intimately with senile changes in the nerve endings or in the cells, or perhaps with both these combined.

3. **Transmissibility of Syphilis to Apes.**—Grünbaum and Smedley inoculated a male chimpanzee on the eyebrow by rubbing into it a portion of a chancre freshly excised. Signs of infection appeared on the sixteenth day, followed by general swelling and induration of the eyebrow and an exfoliation of the skin, leaving its surface yielding a serous or seropurulent secretion. The general health of the animal was unaffected. The spirochete was not found until the thirty-seventh day after inoculation.

4. **Anesthetics and Renal Activity.**—Thompson reports the result of an experimental investigation into the effects of prolonged chloroformed narcosis. His findings are summarized as follows:

1. The volume of urine secreted by the kidney is, as a rule, affected during chloroform narcosis in two ways. In the early stages, when the anesthesia is light, the quantity is frequently increased. During full anesthesia the secretion is always diminished, and may be suppressed.

2. The after effect is invariably a great increase, which in certain periods may reach to four times the normal volume for the same period of time. The maximum outflow occurs about three hours after removal of the anesthetic.

3. The total excretion of nitrogen is, as a rule, greatly reduced—more so than the quantity of urine. The averages taken from experiments with diminished urine volume show that during the anesthetic period the excretion of nitrogen fell to 18 per cent. of the normal, whereas the quantity of urine in the same series fell only to 35 per cent. of that amount. In a minority of the experiments with increased urine volume the total nitrogen per period was also increased, but to a much less extent than the volume of urine in the same experiments.

4. The urine secreted during chloroform anesthesia is almost invariably more dilute (contains less nitrogen per cent.) than the normal urine. This holds good even when the volume of urine is diminished, hence it is inferred that chloroform affects not only the blood flow through the glomerulus, but also the secretion of nitrogenous solids into the tubules and the latter even more than the former. The result, therefore, favors the theory of urinary secretion advanced by Bowman.

5. There is a general but not accurate correspondence between urine outflow, kidney volume, and blood pressure. The relationship between the first and second is closer than between the first and third. A state of almost complete suppression may coexist with a comparatively high blood pressure.

6. In prolonged narcosis, with marked diminution of urine volume, there is a considerable exudation into the renal tubules of leucocytes, which subsequently escape with the urine. The condition is probably produced by more or less vascular stasis in the glomerular vessels.

7. The excretion of chlorids is much increased both during and after chloroform narcosis. In the fourth period after removal of the anesthetic the amount may be ten times the normal quantity in the urine of the dog.

8. Albumin appears in a small proportion of experiments after chloroform inhalation.

9. Reducing substances other than glucose are almost invariably increased. The nature of the reducing substance has not been definitely determined.

5. **Experiments in Density of Chloroform.**—Chapman examined into the percentages of chloroform supplied by Junker's inhaler. He found that the plain vulcanite mask is safer than the more expensive form of inhaler with rubber-rim cushion, but the compression bulb must be worked gently and steadily. The air inlet apertures should never be closed and ought to be unclosable. Owing to variability of the percentages of chloroform vapor supplied, the apparatus is not suitable for more prolonged operations, although when all precautions are observed, the use of the apparatus, with the mask, is fairly safe in careful hands for short periods of anesthesia.

6. **Ethyl Chlorid as a General Anesthetic.**—McCardie claims that ethyl chlorid is less safe than ether and far less safe than nitrous oxid. The latter should be used whenever it is reasonably possible, and ethyl chlorid should be used when nitrous oxid is impossible, and when ether and chloroform are unnecessarily powerful and lasting in their effects. McCardie compares ethyl chlorid to chloroform in the ease and convenience of its administration and its high power of narcosis, while nitrous oxid is likened to ether in the difficulties and complications entailed in its inhalation and in its weak narcotic effects.

7. **Id.**—Knight considers ethyl chlorid a very reliable anesthetic, although in the hands of the untrained he thinks that it is not nearly so safe an anesthetic as nitrous oxid. When the administrator is accustomed to it, it is probably safer than any other anesthetic because so small an amount is necessary to render the patient insensible to pain, recovery from a light anesthesia is rapid, and there is no cyanosis or venous congestion. Only in very rare cases has Knight found it impossible to anesthetize a patient with it. The drug is not suitable for prolonged administration on account of the strain on the anesthetist and the expense. As a preliminary to chloroform anesthesia it is especially valuable.

### The Lancet, London.

*March 17.*

8 Distribution and Recovery of Peripheral Nerves Studied from Instances of Division in Man. J. Sherren.
9 Epidemic Disease in England—The Evidence of Variability and of Persistency of Type. W. H. Hamer.
10 Phlebitis and Thrombosis. W. Haward.
11 Case of Splenomegalic Polycythemia, with Report of Post-mortem Examination. R. Hutchison and C. H. Miller.
12 *Spirochæta Pallida (Spironema pallidum) in Syphilis. T. Shennan.
13 *Rupture of Uterus with Escape of Child into Abdominal Cavity. T. Hunter.
14 Four Cases of Multiform Streptococcic Infection Apparently All Derived from the Same Source. A. Latham, E. P. Paton and H. D. Brice.
15 Local Anesthesia for Cosmetic Operations. L. E. Stamm.

12. **Spirochete in Syphilis.**—Out of 18 cases examined by Shennan six showed the presence of the *Spirochæta pallida*. In three others spirochetes were found which could not with certainty be placed either with *Spirochæta pallida* or *Spirochæta refringens*. In five cases the results were absolutely negative. The remaining cases were doubtful. As regards the lesions, five hard chancres showed positive results; in two the results were doubtful, and in three they were negative. Two non-ulcerated papules gave positive results; two dry papulo-squamous syphilids gave negative results, and two roseolar rashes also were negative. Four condylomata were examined; three were negative and one was doubtful. Four glands were examined and in none could undoubted *Spirochætæ pallidæ* be found. One rupioid syphilid was examined with a negative result. Typical *Spirochætæ pallidæ* were found only in hard chancres and in closed papules—i. e., in typical syphilitic lesions.

Shennan says that while there is a very considerable probability that *Spirochæta pallida* bears an etiologic relationship to syphilis we require to know more about spirochetes in general and to have better methods of distinguishing the many forms intermediate between the typical *Spirochæta pallida* and the typical *Spirochæta refringens* before we can unreservedly accept this as a completely proved fact in pathology. One can say very little as yet with regard to the peculiar loop-like and rounded bodies found in syphilitic glands, and to such bodies as the flagellated structure he described in a film from a hard chancre.

13. **Rupture of Uterus.**—In the case reported by Hunter the rupture occurred about four hours after the commencement of labor. The placenta was delivered about ten minutes after the cessation of the pains. Examination per vaginam disclosed a large irregular tear in the left posterior region of the uterus, with the uterus firmly contracted behind the symphysis and the child in the abdominal cavity. The condition of the patient was such that a laparotomy could not be done. On the other hand, the natural passages were roomy and the tear was judged extensive enough to allow a normal child to pass with little further damage. At the same time it was remembered that, with no history of injury, abnormality in the child was almost certainly the cause of the rupture. The head of the child then was felt for and when it was reached the abnormality was found to be hydrocephalus. Perforation of the head and delivery *per vias naturales* were decided on. The feet were drawn together through the tear, followed by the trunk with the upper limbs. The head, steadied over the tear by a hand in the vagina and two hands over the abdominal wall, was then pierced by a perforator. A rush of fluid followed and the child was easily delivered. After the delivery the abdominal cavity was thoroughly washed out with sterilized normal salt solution at a temperature of 100. To do this a hand was passed in through the tear and the nozzle of the douche guided by it, and with this hand in the abdominal cavity the abdominal contents were well washed. A piece of omentum which presented at the mouth of the vagina was replaced by the nozzle of the douche. Finally, a gauze drain was passed into the abdominal cavity through the tear, a pad was put on over the vagina, and a tight binder was applied. The patient made an uneventful recovery.

### The Australasian Gazette, Sydney.

*February 20.*

16 Medical Matters in Victoria—A Retrospect and Prospect. A. J. Wood.
17 Observations on Appendicitis. R. S. Bowker.
18 Surgical Treatment of Appendicitis. E. J. McCardel.
19 Case of Lorenz's Operation for Congenital Dislocation of the Hip. A. J. Turner.
20 Present Position of the Roentgen Rays in Medicine and Surgery. L. H. Harris.
21 Four Cases of Laminectomy. W. J. S. McKay.
22 Case of Appendicostomy. P. T. Thane.

### Revue de Chirurgie, Paris.

*Last indexed, page 993.*

23 (XXVI, No. 1.) *Des opérations conservatrices dans le traitement des utérus didelphes. Quénu and E. Le Sourd.
24 De la cholérrhagie dans les kystes hydatiques du foie (of liver). F. Terrier and C. Dujarier.
25 Abcès du foie et cholérrhagie précoce (abscess in liver). A. Valence.
26 (No. 2.) *L'ulcère peptique du jéjunum après gastroentérostomie. A. Gosset. (Commenced in No. 1.)
27 *De l'hydropisie intermittente de la vésicule par oblitération du canal cystique. E. Villard and G. Cotte. (Commenced in No. 1.)
28 Note sur une anomalie des doigts (of fingers). C. Féré.

23. **Conservative Operations in Case of Double Uterus.**—Quénu and Le Sourd have found in the literature reports of only 3

cases of double uterus with independent fundi in which mere puncture or incision was attempted to evacuate an accumulation of blood. These cases all terminated fatally. In another group of 7 cases with hematometra, one-half of the double uterus was removed by a laparotomy, with ablation of the adnexa on one side. The results were favorable in all. The list includes one case personally observed by Quénu, which is described with all the particulars. He states that whether or not a conservative operation is permissible depends on the condition of the cervix. As a rule, the intervention must be a supracervical hemi-hysterectomy. It is extremely important to determine beforehand the permeability or non-permeability of each cervix. The adnexa will probably be found degenerated on the obstructed side. He has collected from the literature another group of 3 cases of double uterus with independent bodies, not complicated by hematometra, but with symptoms on the part of the adnexa. Total hysterectomy was done in each case, and the results were excellent. Bousquet found in the literature reports of 4 cases of dual pregnancy in a double uterus, each half containing a fetus, expelled by abortion. No instance is known of pregnancy in the organ left after hemi-hysterectomy, but theoretically there is no reason why it might not occur.

26. **Peptic Ulcer of Jejunum After Gastroenterostomy.**—Gosset remarks that it was only six years ago that peptic ulcer of the jejunum was observed for the first time, and after a gastroenterostomy. Since Braun first noticed it, 30 cases have been published, and Gosset has had opportunity to observe a case personally. His patient was a man of 42. Two years after posterior transmesocolic gastroenterostomy, a peptic ulcer in the jejunum perforated into the transverse colon. Ileo-sigmoidostomy was done after the perforations in jejunum and colon had been sutured. Recovery was uneventful. In the 31 cases reported, only 2 of the patients were women; the ages of the patients ranged from 4 months to over 50 years. Five different varieties of gastroenterostomy had been employed. The interval before the peptic ulcer developed sufficiently to cause symptoms was from ten days to seven years, the majority occurring within a year or so. In most cases the signs of perforation appeared without any preceding symptoms. In another group, symptoms developed similar to those observed with gastric ulcer, localized peritonitis with infiltration of the abdominal wall, the palpation findings resembling actual tumors in some cases. There is still a third group in which the ulcer scarcely attracts attention until it perforates into some adjacent organ, generally the transverse colon. The diagnosis is not difficult if the possibility of peptic ulcer after a gastroenterostomy is borne in mind. The prognosis of the fulminating form is grave; the form with localized peritonitis yields readily to operative measures, yet the danger of recurrence must not be forgotten. In 9 of the 20 cases in this group there was recurrence. In one case five operations were necessary, and, finally, a gastrostomy. In 2 other cases jejunostomy had to be done at last. The gastroenterostomy had been done for non-cancerous stenosis of the pylorus in every instance. Hyperacidity was the rule in the cases with recurrence, although there were some exceptions. The constant coincidence of stenosis, hyperacidity and great dilatation of the stomach is suggestive. The conclusions deduced from this long article are that medical treatment, with care as to diet, should be kept up for a long time after a gastroenterostomy, and that in operating the opening should be made as far from the pylorus as possible. The details of the various cases are tabulated and summaries given.

27. **Intermittent Distention of the Gall Bladder.**—The outlet of the gall bladder may become transiently obstructed, causing an intermittent distention of the organ. The gall bladder becomes enlarged at intervals, and the subsidence of the tumefaction is accompanied by agonizing paroxysmal pain. The obstruction in the cystic duct may be caused by kinking of the duct or by a stone or stones acting like a valve to close the passage at times. The patients usually have had a "gallstone past," and the paroxysmal pain is located in the right hypochondrium or epigastric region. It is atrocious, and may radiate like gallstone colic, and, like the latter, may cause reflex phenomena, but without temperature.

### Archiv f. Verdauungs-Krankheiten, Boas', Berlin.

*Last indexed, page 516.*

29 (XII, No. 1.) •Die Hyperacidität des Magensafts und ihre Bestimmung mittels der Sahli'schen Probemahlzeit (Sahli test of gastric juice). W. Rubow (Faber's clinic, Copenhagen).

30 Eine neue Methode, die Funktionen des Verdauungs-Apparates zu prüfen (test of digestive functions). M. Einhorn (New York). See abstract on page 615.

31 •Die Hydriatik für nervösen Dyspepsie und der organischen Magen-Affektionen (of stomach). J. Sadger.

32 •Influence of Silver Nitrate on Composition of Gastric Juice and on Motor Energy of Stomach.—Zur Frage des Einflusses des Argenticum nitricum auf die Zusammensetzung des Magensaftes und die motorische Kraft des Magens bei Kranken. A. A. Baibakoff.

29. **The Sahli Test for Hyperacidity.**—Rubow states that he has examined the stomach functioning in 704 patients with various dyspeptic disturbances. Of the total number only 213 were found with a hyperacidity of 75 or over. He classifies these hyperacid cases and tabulates the findings for comparison, giving the highest in each case. Not a single individual was found with an acidity of more than 125, in which the acidity could be ascribed to the hydrochloric acid secreted. The large majority showed an acidity (due to hydrochloric acid) of not more than .44 per cent. Only in 4 cases was it higher, reaching 124 and 125, that is, 0.45 or 0.46 per cent. He has become convinced that the secretion of a genuinely hyperacid gastric juice must not be regarded as necessarily a pathologic factor. His extensive experiences with the Sahli flour and butter soup test were not favorable. There is too much room for error in the stratification of the soup and the stomach contents, the fat rising to the top.

31. **Hydrotherapy of Nervous Dyspepsia and of Organic Stomach Affections.**—Sadger gives minute directions for hydrotherapy based on wide experience. In the chronic gastric affections, and in nervous dyspepsia, powerfully stimulating general applications are indicated. Even the local applications are given in their most stimulating form. The sitz bath, for instance, is taken with water as cold as from 8 to 14 C. (46 to 57 F.), for three, five or fifteen minutes. In organic affections, especially in case of round ulcer, he has often found that small pieces of ice introduced into the rectum act like magic in arresting acute hematemesis. Cold fluids introduced in the rectum, he found, reduce the temperature of the stomach in some way. Swallowing scraps of ice has the opposite effect and actually favors hemorrhage as the water accumulates and becomes warm. A cold coil over the stomach, over a cold compress, is an effectual adjuvant, the flow of ice-cold water through the coil being kept up continuously possibly for a week. A sheet is wrung out of cold water and laid over the trunk, tucked in around the sides, and over this the cold coil is applied over the stomach. The patient is fed with tepid, sweet or sour milk in small portions for four or five weeks. Sadger commences with a teaspoonful every fifteen minutes and increases the amount to a tablespoonful, then to half an after-dinner coffeecupful, and finally to a teacupful, increasing the intervals to thirty or sixty minutes. He insists on this diet after acute hemorrhage and also in the treatment of chronic ulcer. Even on the day of the hemorrhage, it is possible to commence with minimal amounts of the milk (ice cold). Sadger quotes from Winternitz that the factors inducing round ulcer of the stomach are a chlorotic tendency, reduction in hemoglobin, reduced alkalinity of the blood and hyperacidity of the gastric juice, with spasmodic contraction of the blood vessels in the stomach mucosa. These factors, he says, induce a predisposition to gastric ulcer. Hydrotherapy, which has such a powerful action on all these factors, forms thus a truly causal treatment for the resulting predisposition to gastric ulcer. It seems to be the general experience that the main contingent of gastric ulcers is presented by chlorotic girls. The chief reliance is on general stimulating measures, with procedures to influence the circulation in the stomach lining and walls. These include cold sitz baths for about four

minutes, stimulating packs, generally in combination with the hot coil, which, however, is never left in place for more than ten or fifteen minutes. Sometimes the cold coil is applied to the heart to improve the general and local circulation. These measures are supplemented by a strict milk diet. Sadger applies an abdominal pack, changed every three hours. Once or twice a day a coil of hot water (40 C.—104 F.) is inserted in the pack for ten or fifteen minutes. Once a day a sitz bath is taken with water at 46 or 57 F. for from three to five minutes. Early in the morning the body is rubbed off with a cloth wrung out of very cold water, avoiding the chest and abdomen. Later, alternating hot and cold procedures are used. A good arrangement for home use is a cold pack until the sheet gets warm (20 to 30 minutes), with a half bath afterward at 22 or 20 C. (68 F.) for two or three minutes. Milk is the only food allowed for four or five weeks, commencing with a teaspoonful every fifteen minutes. The milk must always be very slowly sipped.

32. **Influence of Silver Nitrate on Gastric Juice and Motor Functions.**—The conclusions of Baibakoff's numerous experiments and clinical experiences are that silver nitrate has the property of increasing the secretion of hydrochloric acid and, hence, the total acidity of the gastric juice. The use of the drug is consequently contraindicated in cases of pre-existing hyperacidity. It is indicated, for the same reason, in cases of deficient or lacking secretion of hydrochloric acid, as in mucous gastric catarrh. The silver nitrate also aids in the digestion of albumin. The drug has further an anticatarrhal and an antifermentative action, so that it might be used to advantage in cases of abnormal fermentation. Experience to date has further demonstrated that the silver nitrate promotes the emptying of the stomach. In case of relaxed stomach musculature this property might be utilized. The various effects of the administration of silver nitrate mentioned above were observed with small doses (0.002 gm. three times a day), as well as with large amounts (0.03 gm. three times a day). The findings in 16 cases before, during and after the administration of the drug are given in tabulated form.

### Beiträge z. klin. Chirurgie, von Bruns', Tübingen.

33 (XLVIII, No. 1.) *Distensions-Plastik mittels Mobilisierung der Harnröhre (of urethra). V. v. Hacker (Graz).
34 Stab Wound of Spinal Cord in Neck. Recovery After Operation.—Halbseitenläsion des oberen Halsmarkes durch Stich. Beginnende Meningitis. Heilung durch Operation. Amberger.
35 Zur Behandlung der Pseudoarthrosen. Gelinsky. 24 cases.
36 *Ueber den Dünndarmkrebs (cancer in small intestine). J. Kanzler (Czerny's clinic, Heidelberg).
37 Ueber den Volvulus des ganzen Dünndarms und aufsteigenden Dickdarms (of entire small intestine and ascending large intestine). W. Danielsen.
38 Ueber die Torsion des Netzes (of omentum). E. Pretzsch.
39 Histologischen Untersuchungen an exstirpierten Gallenblasen (gall bladders after removal). C. Otten.
40 Die Madelung'sche Deformität des Handgelenkes (of wrist). F. Sauer.

33. **Plastic Operations by Mobilization of Urethra.**—Von Hacker has performed 13 operations on the penis requiring stretching of the urethra, and the results have been extremely gratifying in every instance. He gives the details of all his cases and reviews the history of this technic. It proved successful in his hands in 5 cases of hypospadia; in 1 of a defect resembling hypospadia, remaining after an ulceration; in another case for the transformation of a perineal into a penal hypospadia; in 2 cases for the cure of a lip fistula of the urethra; in 3 cases of stricture, and in 1 of traumatic rupture of the urethra. The operations were done under infiltration or general anesthesia, but in future he proposes to use spinal analgesia. He prefers the tunneling technic as insuring primary healing. Among the various technical points which he mentions are the following: The urethra must be mobilized for about twice the length of the part it is to substitute. The urethra should not be stretched to a length of more than one and a half times its length in the unstretched condition. The limits of resection and stretching for plastic purposes can be more extensive when the conditions are such that retention of the urinary functions alone and not of the sexual is sought, as, for instance, in case of cancer.

36. **Cancer of Small Intestine.**—Kanzler adds 2 to the 23 cases of cancer of the small intestine which he has been able to collect, giving the details of the entire number. Fourteen of the patients died without an attempt at operation, being generally moribund when first seen. Only one patient, a man, survived out of the 11 operated on, and he succumbed nine months later to pneumonia. Six of the patients were in too advanced a stage of malignant disease for the operation to be more than palliative, and only 3 obtained relief and brief lengthening of life. In one case in which five feet of small intestine were resected, the patient lived for five months. In the single case in which the operation was done in two sittings, the patient, a man, survived for nine months until he contracted fatal pneumonia. Any operation on the small intestine is dangerous. Scarcely 50 per cent. of the material analyzed exhibited symptoms allowing a clinical diagnosis. Vague resistance was noted in a very few cases, and a subjective sense of pressure in a few others. Adhesions with adjacent organs were frequently encountered. Intestinal hemorrhage was observed in only 2 instances.

### Deutsche medizinische Wochenschrift, Berlin and Leipsic.

41 (XXXII, No. 7.) Sind die hemolytischen Immun-Körper oder die Komplemente Katalysatoren, also Fermente? L. v. Liebermann.
42 *Antefixatio uteri. Uebertragung. F. Ahlfeld.
43 *Die Prognose bei Operationen des Vulva-Carcinoms. D. Grünbaum.
44 *Fall von schwerer Stovain-Vergiftung nach Lumbal-Anasthesie nebst Bemerkungen über halbseitige Anesthesien (stovain intoxication). Trantenroth.
45 *Dampfdusche als Expectorans (steam douche bath to promote expectoration). A. Lissauer.
46 *Treatment of Increased Arterial Pressure in Arteriosclerosis. —Steigerung des arteriellen Druckes bei der Arteriosklerose und deren Behandlung. A. Erlenmeyer.
47 Ueber die praktische Verwendbarkeit der Pavyschen Titrationsmethode für die Bestimmung des Zuckers im Harn (Pavy test for sugar). M. Elger.
48 Ueber Kiefer-Cysten (in jaw). H. Kronheimer.
49 Ueber Klystiere und Irrigationen. M. Sternberg. (Concluded.)
50 Zur Kasuistik der Missbildungen (monstrosities). L. Hecht.
51 (No. 8.) *Malachite Green Culture Medium for Typhoid Bacilli.—Der kulturelle Nachweis der Typhusbacillen in Faeces, Erde und Wasser mit Hilfe des Malachitgrüns. F. Loeffler.
52 Apparatus for After-Treatment of Open Pneumothorax.—Apparat zur Nachbehandlung des offenen Pneumothorax. H. Seidel.
53 Zur Frage der Hebotomie. Blumreich.
54 *Iodismus acutus und Thyreoiditis acuta. Lublinski.
55 Cystoscope on the Principle of Maisonneuve's Bougie.—Cystoskop nach Maisonneuveschem Prinzip. O. Ringleb.
56 Eine neue Cirkulations-Kühlung für die Finsen-Lampe. Axmann.
57 Künstliche Trommelfelle aus Paraffin (artificial ear drum). Hamm.
58 Simplified "Four-Cell" Bath.—Das Vierzellenbad in einfachster Ausführung. A. Philippson (Hamburg).

42. **Protracted Pregnancy in Case of Antefixation of Uterus.**—Ahlfeld noticed in 2 cases that the pregnancy was unusually long and the children abnormally large after preceding antefixation of the uterus. In looking over the literature he found records by eight authors of pregnancy from forty-three to fifty-two weeks in length in multiparæ who had been previously treated by antefixation of the uterus.

43. **Prognosis of Carcinoma of Vulva.**—Grünbaum reports 5 cases from Landau's clinic which confirm the conclusions drawn from study of the literature, namely, that radical removal of carcinoma of the vulva was followed by freedom from recurrence in a certain proportion of cases, even when there was metastasis in the inguinal glands. To insure the best prognosis it is necessary to extirpate with the primary growth the inguinal glands on both sides, far into sound tissue, irrespective of the findings on palpation.

44. **Intoxication from Stovain.**—Trantenroth describes a case of severe intoxication consequent on lumbar injection of 0.06 gm. stovain, preceded by 1 to 1,000 solution of adrenalin. The patient was a parturient in difficult labor and the anesthesia was preliminary to forceps extraction. Ten minutes after the injection the patient complained of suffocating, the lips and vaginal mucosa became cyanotic, the pulse slow and small, respiration slow and shallow; she became unconscious, but revived somewhat after injection of 2 gm. of a 20 per cent. solution of camphor. The muscles were completely relaxed and both arms and legs were paralyzed.

The child was safely extracted, with surprisingly little loss of blood. By the next day all symptoms had subsided except difficulty in moving one leg. Three days later intolerable headache developed, with pains in the shoulders, radiating into the limbs, worse at night. After these severe pains had lasted for four days, a sudden sensation as if an electric current had been passed through her body, was followed by a remission of all pains, but she felt stiff and her right leg was subjectively ice-cold. Fourteen days after the injection symptoms of a local spinal meningitis and of a right neuritis of the roots developed. The woman was unable to leave her bed until five weeks after the lumbar injection, and her gait was not normal for several weeks later, owing to a painful cramp in the knee. Trantenroth ascribes the meningitis to chemical irritation from the stovain, and remarks that an ascending suppurative meningitis might have developed if there had been puerperal infection. The irritation is not surprising, he remarks, when we consider that the solutions of stovain have an acid reaction, induce hyperemia and irritate the tissues. Braun has even witnessed gangrene from their use. In Sonnenburg's case a 10 per cent. solution of stovain was injected into the abdomen on account of a septic process. The hyperemia, irritation and possibly gangrene which it induced at the point of injection evidently provided a good culture medium for the streptococci in the blood, and fatal suppurative meningitis developed. Trantenroth has been much impressed with the advantages of lumbar anesthesia in obstetrics. The anesthetic does not affect the child, while chloroform is liable to act on the child and to increase the tendency to asphyxia. Lumbar anesthesia does not favor hemorrhage later, as chloroform does, but has a directly opposite effect. It also enables a laceration of the perineum to be sutured at once without further anesthesia, after waiting tranquilly for the termination of the third stage of labor.

45. **Steam Douche to Promote Expectoration.**—Lissauer has been using for a year a method of stimulating the secretions which has proved very effectual and harmless in his hands. A spray of steam at a temperature of from 43 to 52 C. (110 to 125 F.) is sprayed rapidly over the upper part of the body for fifteen seconds, followed by a cold fan douche for three or five seconds, after which the patient is rapidly rubbed down and dressed. He cites 16 cases in detail to show the prompt effect on the expectoration induced by this procedure. It does not produce much of an appreciable reaction on the skin, but the patients feel the relief very soon.

46. **To Reduce Blood Pressure in Arteriosclerosis.**—Erlenmeyer regards the abnormally high arterial pressure in arteriosclerosis as a self-regulating process. When the blood pressure is not high treatment should aim to raise it, possibly by carbonated saline baths, not over 30 C. (86 F.) in temperature. In cases with moderately increased arterial pressure, the viscosity of the blood should be gradually reduced and kept down by a gradually progressive course of iodids. In patients with very high arterial pressure the danger of rupture of a blood vessel should be averted by periodically repeated venesection, keeping the viscosity of the blood reduced with iodids.

51. **Malachite Green Culture Media for Typhoid Bacteria.**—Loeffler has now had several years' experience with malachite green agar, and regards it as a great improvement in the technic for differentiation of typhoid and allied bacteria.

54. **Acute Iodin Intoxication and Acute Inflammation of the Thyroid.**—Lublinski was treating a syphilitic with iodid when the thyroid began to swell; the course of the case demonstrated that the iodid was causing acute thyroiditis. This condition subsided on suspension of the drug, but increased again as it was resumed. He reviews a few similar cases on record.

### Deutsche Zeitschrift f. Chirurgie, Leipsic.

*Last indexed, page 920.*

59 (LXXX, Nos. 1-2.) *2 operierte Fälle von Leber-Ruptur (of Liver). Thole.
60 *Zur Kenntnis der traumatischen Pankreas-cysten. F. Honigmann.
61. *Zur Resektion des carcinomatösen Magens (stomach). A. Brüning.
62 *Beitrag zur totalen resp. subtotalen Exstirpation des carcinomatösen Magens (stomach). H. Ito and S. Asahara (Kyoto).
63 Infektiöses Aneurysma der linken Coronar-Arterie als Teilerscheinung einer Septicopyaemie nach Osteomyelitis acuta infectiosa femoris. E. Ruge (Bonn).
64 Ueber syringomyelische Schultergelenkverrenkungen (dislocation of shoulder). D. G. Zesas.
65 Exp. Untersuchungen und klin. Erfahrungen über die Verwendbarkeit von Novokain für die örtliche Anästhesie. H. Heineke and A. Laewen (Trendelenburg's clinic, Leipsic).
66 Kahnbeinbrüche der Fusswurzel (fracture of scaphoid bone). Bergmann.
67 (Nos. 3-4.) Melano-Sarkom des harten Gaumens. Beitrag zur doppelseitigen Oberkiefer-Resektion (of upper jaw for cancer of hard palate). H. Seidel.
68 Torsion of Adnexa in Inguinal Hernia in Young Children.—Stiel-Drehung der Adnexe in Leistenbrüche im frühen Kindesalter. N. Damianos.
69 Ueber Luxatio pedis sub talo. Wendel.
70 Ueber die alveolaren Geschwülste der Glandula carotica (tumors). E. Kaufmann and E. Ruppanner.
71 Ueber einen pathologischen Befund bei "Fusssohlenschmera" (Morton's disease). Pochhammer.
72 Anatomisches über "Paget's disease of the nipple." A. Schambach.
73 Ueber kongenitale sacrococcygeale Fisteln. A. Martina.
74 Zur Aetiologie der angeborenen Hüftgelenksverrenkung (dislocation of hip joint). P. Ewald (Vulpius' clinic, Heidelberg).
75 Zur Technik der Osteoplastik am Schädel (on skull). C. Sultan.
76 Principles of Arterial Collateral Circulation.—"Entstehung und Wesen des art. Col.—Kreislaufs." M. Katzenstein. Reply to Ilier.
77 (Nos. 5-6.) *Zur Behandlung der Knochenbrüche. Heusner (Barmen).
78 *Ueber Harnblasensteine (stones in bladder). J. Finsterer.
79 *Zur Pathologie des Carcinoms der weiblichen Urethra (in women). W. Knoll (Constance).
80 Zur Aetiologie tumor-verdächtiger Cysten der langen Röhrenknochen (long bones). P. Glimm.
81 *Ueber die bisherigen Resultate der verschiedenen operativen Eingriffe bei Cecum-Tuberkulose und Appendicitis tuberculosa (comparative study of results of various modes of operative treatment). P. Campeche (Roux's clinic, Lausanne).
82 Die Diastase der Unterschenkelknochen bei Distorsionen des Fussgelenkes (separation of bones of leg in dislocation of ankle). Vorschutz.
83. Ueber die extraperitoneale Blasen-Hernie (of bladder). R. Lücke.
84 Fall von subkutaner Mastdarmabreissung durch Ueberfahren (tearing out of rectum). Kirsteln.

59. **Rupture of Liver.**—The patients in Thole's 2 cases were healthy soldiers. In one the esophagus had been ruptured as well as the liver, but it caused no symptoms and was a surprise when discovered at the autopsy. Thole discusses the indications and best technic for treating ruptures of the liver. He advocates tamponing without suture for all bullet wounds and for rupture with much crushing of the tissues and ragged edges. He remarks that the liver in even very young children takes a suture as well as that of the adult. The rupture of the liver in the patient who recovered was a comparatively smooth tear, and it was sutured with three stitches with No. 6 catgut. Notwithstanding internal bleeding, the pulse is liable to become stronger after a time. The first disturbance in the pulse must be regarded as merely a sign of reflex nervous shock. The area of liver dullness grew rapidly smaller owing to the local traumatic paralysis and distension of the transverse colon.

60. **Traumatic Cysts in Pancreas.**—Honigmann devotes 74 pages to a study of this subject, to which his interest was attracted by a case personally observed. The patient was a healthy young man; the symptoms indicated contusion of the left kidney after trauma affecting the left upper abdomen. A retroperitoneal tumor gradually developed, which was reached by a lumbar incision, as it was uncertain whether it originated in the kidney or pancreas. The cyst found in the pancreas, contained all three of the pancreatic ferments, and there were indications of traumatic perinephritis. Honigmann reviews 70 similar cases that he has found on record, the age of the patients ranging from 2 to 62 years. The tumor is the clue to the diagnosis, especially the fact that it is covered by the stomach above and by the transverse colon below when these parts are inflated. General weakness and progressive emaciation are other important symptoms. The cramp-like pains sometimes noted subside after eating. The intestinal functions are disturbed, and constipation amounting to actual occlusion has been observed in some cases. The prognosis is favorable with opera-

tive treatment, but a case is known in which diabetes developed after an interval of eight years of health. In conclusion Honigmann remarks that any traumatism affecting this region demands caution. A spontaneously arrested hemorrhage would offer less chances for cyst formation or other disturbances later if the patient were kept in bed for several weeks and carefully supervised.

61-62. **Resection of Carcinomatous Stomach.**—Brüning analyzes the experiences at Giessen, where resection of the stomach on account of carcinoma has been done thirty-two times. The mortality was among the smallest on record, 18.8 per cent., only surpassed by that of Maydl, who has reported 18.6 per cent. mortality in 25 operations. The deaths were due to pneumonia in three instances, and to collapse, embolism and chloroform once each. Some patients succumbed to recurrence of the growth two and one-half and four and one-half years after the operation, the average survival of those who succumbed to recurrence later being about sixteen months.

Ito and Asahara report from Japan a case of total resection of the stomach on a much debilitated patient who succumbed to collapse. In a second case the resection was partial and the patient survived six months. They remark that cancer of the stomach does not reach the surgeon until in such an advanced stage that radical extirpation is scarcely possible. The results in such cases, however, should encourage the surgeon to operate in cases from which he has hitherto held aloof as scarcely indicating such serious measures. The article concludes with an extensive bibliography of international literature.

77. **Treatment of Fractures.**—Heusner describes his method of applying extension to the limb while at the same time allowing the patient to be up and about. The apparatus for the arm consists of a long strip of metal bent in the shape of the arm with four half bracelets soldered to it, one of which embraces the forearm, two the upper arm and one fits in the axilla. The metal strip is bent with an extra U-shaped turn at the elbow, to impart elasticity to it, and the strip projects beyond the hand. Extension is applied from the hand with an elastic band passing over a pulley in the outer end of the strip and fastened to the U-shaped projection of the strip at the elbow.

78. **Stones in the Bladder.**—Finsterer's long article is devoted to study of the urinary calculi included in the Billroth-Hochenegg collection at Vienna. The monograph is illustrated and a bibliography of 70 references appended.

79. **Carcinoma of Female Urethra.**—Knoll had occasion to observe the case of a woman of 68, previously healthy, who was suddenly affected with profuse hemorrhage from the genitalia. This was followed by pain in micturition and an adenocarcinoma originating in the urethra was found and removed. He has found reports of 32 such cases published in medical literature.

81. **Tuberculous Affections of Cecum and Appendix.**—The results of various methods of operative intervention in such cases have been diligently compiled by Campiche, the list of titles of works consulted numbering 202. The total number of cases is 379, with a mortality of 18.6 per cent. More than 33 per cent. of the patients remained in good health for months and years afterward. On the whole, about 37.9 per cent. of all the patients succumbed sooner or later to their tuberculous affection or its results. Ileocecal resection makes the best showing; during the last five years, with the frequent side-to-side union of the stumps, the recoveries amount to 86 per cent. When resection was supplemented by the construction of an artificial anus, more than 80 per cent. of the patients thus treated succumbed. Very extensive resections were always followed by the speedy death of the patient. Exploratory laparotomy seems to be a serious measure in these cases; only 15.7 per cent. of those thus treated remained permanently healthy. Simple incision of the abdominal wall was well tolerated, but most of the patients died not long afterward, and in more than a fourth of the cases a fecal fistula resulted. The Murphy button was used in 19 cases, and once was the direct cause of death. It is being used more frequently now than heretofore and without mishaps. Appendicectomy gave 86.4 per cent. of immediate recoveries, but as the almost invariable tuberculous process in the adjoining intestine persisted, the condition was not much improved, and only 13.6 of the 22 patients can be regarded as permanently cured. The material is classified and tabulated and the article written as objectively as possible.

**Münchener med. Wochenschrift, Munich.**

85 (LIII, No. 3.) *Pyelographie. (Roentgenographie des Nieren-Beckens nach Kollargol-Füllung). F. Voelcker and A. Lichtenberg.
86 *Upward Squint.—Höhenschielen. M. Miller.
87 *Zur Diagnostik der Choledochus-Steine. H. Ehret.
88 *Roentgen-Untersuchung des Magens und Darmes (radioscopy of stomach and intestines). H. Rieder.
89 Behandlung der suprakondylären Fraktur des Humerus und Femur mit Bardenheuerscher Extension. Schrecker.
90 Ueber die Douglas-Eiterungen. R. Morian.
91 *Zur Mobilisierungsmethode der Skoliosen nach Klapp. K. Nieny.
92 Origin of New Growths.—Zur Entstehung der Neubildungen. Ritter.
93 Vier Wochen in der Front der russischen Armee. F. Colmers.

85. **Pyelography.**—Voelcker and Lichtenberg have coined this term for radiography of the kidney and ureter after these structures have been filled with a solution of a silver salt. The fluid is introduced into the hilum of the kidney through a catheter in the ureter. The shadow cast by the Roentgen rays discloses any bending or kinking of the ureter, any obstruction or dilatation of the parts, and anomalies generally. They give some of the radiograms thus obtained in an experience with 10 patients, all women but one. The radiograms were failures in four instances, but in the others they were remarkably distinct.

86. **Upward Squint.**—Miller was able to banish evidences of irritation of the vagus and a diversified train of symptoms in 10 cases by correction with prisms of an existing upward squint. His first patient was a young woman who had suffered for months from extreme nervousness, oppression and cramps in the stomach, eructations, loss of appetite, nausea, cardiac oppression and other symptoms of pronounced neurasthenia. She also suffered excessively from seasickness and from nausea when riding in the cars or swinging. Correction of the squint banished at once all these symptoms in this and in all the other cases.

87. **Stones in Common Bile Duct.**—Ehret calls attention to the differentiating signs of stones in the common duct. The temperature is generally normal, but after longer or shorter intervals, from four to twelve weeks, the temperature may rise sometimes as high as 41 C. (105 F.) and persist high for one—or more rarely for two or three days, and then drop abruptly to normal. It remains normal between the attacks. These periodical rises in temperature are accompanied by exacerbation of an existing icterus, or its appearance if not already present. The icterus develops rapidly but declines very gradually. The liver is generally tender on pressure, but there are no spontaneous pains in the liver region. Ehret knows of two cases in which these attacks recurred at intervals for years, and yet there never were any spontaneous pains. One patient noticed merely an outbreak of sweat and a certain feeling of weakness before an attack. This triad of recurring temperature and icterus without pains has been observed by Ehret in 17 cases; its occurrence may be accepted as positive evidence of a stone in the common bile duct, although its absence does not necessarily exclude such a contingency. The symptoms are the expression of exacerbations of cholangitis, and stones in the common bile duct are peculiarly liable to promote such a process.

88. **Roentgen Examination of Stomach and Intestine.**—Rieder reviews some of the important findings that can be studied on the living subject after ingestion of a suspension of 10 or 15 gm. of bismuth in 50 c.c. of water. The large intestine can be examined by aid of a rectal injection of 100 gm. bismuth in a quart of milk, oil or water.

91. **Improved Technic for Mobilization of Spine in Scoliosis.**—The patient takes hold of a ring suspended as high above his head as he can reach. He is then instructed to raise the knee on the other side as high as possible and to clasp the

hollow of the knee with the free arm, bending the head far over on that side. The arms are then reversed, and this exercise is repeated ten or twelve times. Nieny states that it is remarkably effectual and convenient.

**Riforma Medica, Naples.**

94 (XXI, No. 48) Sull' azione dei raggi di Roentgen sul virus della rabbia (x-rays in rabies). A. Calabrese.
95 *Sulla cura delle anemie per mezzo di anticorpi (antibodies). G. Norsa.
96 Cura chirurgica della colecistolitiasi (stones in gall bladder). O. Cignozzi. (Commenced in No. 41.)
97 *Il metodo di Cathelin nella cura dell' incontinenza essenziale d'orina (epidural injections for incontinence of urine.) C. Bruni.
98 (No. 49) *La determinazione quantitativa dell'acido cloridrico del succo gastrico col metodo Petteruti (gastric juice). S. Barba.
99 Tumore misto congenito della lingua (of tongue). S. Rolandi.
100 *Caso di nevralgia del trigemino curata colla radiotherapia. A. Gramegna.
101 (No. 50.) *La formula leucocitaria nell'avvelenamento acuto prodotto dagli alcaloidi dei funghi velenosi, ed influenza dell' atropina sull'azione della muscarina (atropin in mushroom poisoning). G. Spagnollo and M. Signer.
102 *Radium Treatment of Rabies.—Sull'azione curativa dei raggi del radio nella rabbia da virus di cane. G. Tizzone and A. Bongiovanni.
103 (No. 51.) Importanza della radioscopia nello studio delle stenosi dell'esofago. S. Barba. Two cases.
104 *Sulle cirrosi biliari e del loro trattamento chirurgico. O. Cignozzi. (Commenced in No. 49.)

95. **Serum Treatment of Anemia.**—Norsa's experiences with 4 anemic patients treated with a prepared anti-anemia serum were not promising. The serum treatment caused a transient increase in the number of figured elements in the blood, but this soon passed away, and no permanent benefit was apparent.

97. **Epidural Injections in Treatment of Incontinence of Urine.**—Bruni tried this treatment in 6 patients, from 11 to 17 years old, with negative results. In 7 others, from 10 to 15, one or two injections permanently cured the incontinence. Eleven others, from 6 to 15 years of age, are still under treatment, and the improvement observed presages a cure in time. He commends this method of treatment as harmless and liable to prove extremely effectual. He found that 10 c.c. was not too large an amount to inject and was preferable to smaller doses. In an experience with more than 100 injections he never had any by-effects and never had any difficulty in introducing the needle into the sacral tract. See abstract, page 83, vol. xliii.)

98. **Petteruti Test for Hydrochloric Acid.**—Barba has been experimenting with the test devised by Petteruti of Naples. It is based on the fact that Congo-red paper is not affected by hydrochloric acid in combination with albumin, while it turns blue under the influence of even a trace of free hydrochloric acid. The yolks of two eggs are stirred into 300 c.c. of bouillon and the whole filtered. About 250 c.c. are then ingested by the person to be tested, and the rest of the bouillon is set aside. An hour later some of the ingested bouillon is withdrawn with the stomach tube. A 2 per thousand solution of hydrochloric acid is then added, a drop at a time, to 5 c.c. of the bouillon that had been set aside, testing each time to see how many drops are necessary to saturate the bouillon until the Congo-red reaction occurs. The procedure is then repeated with 5 c.c. of the stomach content. The difference between the results, multiplied by 50, represents the number of cubic centimeters of the solution of hydrochloric acid containing an amount of hydrochloric acid equivalent to that secreted in the stomach in the course of one hour. Experiments on healthy persons with this test showed that this amount was from 0.2 to 0.5 gm. Multiplying by 4 to bring the 250 c.c. to 1,000 c.c., the physiologic limits were 0.8 and 2 gm. The test was applied on 11 patients with stomach troubles and the results confirmed the clincal findings. The simplicity and repidity of the test commend it, although it shares with similar tests the drawback that the secretion of gastric juice varies with different stimuli and with different people.

100. **Cure of Trigeminal Neuralgia with Radiotherapy.**—The patient in the case described was a man of 33, who had suffered for six years with trigeminal neuralgia. He had undergone three operations for its relief, including Gasserectomy, but the neuralgia recurred always after a brief interval. The attacks of pain recurred every five minutes and the patient was much debilitated, as eating had become so painful that he refrained from solid food. Radiotherapy was then tried and improvement was apparent after three sittings. The "localizer" attached to the Roentgen tube was introduced into the mouth and applied directly to the edge of the upper jaw. Four H units were given at the first sitting, the rays corresponding to the number 5 on the Benoist radiochromometer. The sittings were repeated a week later and after the third week, and then were suspended for a month, as a slight reaction was apparent on the mucosa. Six sittings were given in all, representing a total of 26 H units. The neuralgia entirely vanished after the third sitting, and there has been no recurrence during the six months since. The patient can now eat like other people, but he is careful to refrain from washing with cold water.

101. **Blood Findings in Mushroom Poisoning.**—Tables are given of the findings in 3 cases of mushroom poisoning to demonstrate the marked leucocytosis which accompanies it. Experimental research showed that muscarine has the most powerful action in this respect. Also, that it might be possible to utilize in the clinic the antagonistic action of atropin, which, like pilocarpin, digitalin, carbolic acid, typhoid infection and malaria, reduces the number of colorless corpuscles.

102. **Radium Treatment of Rabies.**—Tizzoni's research on this subject has been chronicled in these columns, as also the fact that the government has provided him with radium to carry on his experiments on a larger scale. He here announces facts which seem to show that the germ causing rabies passes through two distinct phases in the cycle of its evolution. The first phase corresponds to the onset of the disease; in this stage the germs are fragile and easily destroyed by the influence of the radium. In the second phase they are more resistant and are influenced very little, if at all, by the radium rays. This renders more promising the prospects of successful radium treatment of hydrophobia in man if applied in the incipiency of the disease.

104. **Surgical Treatment of Biliary Affections.**—Cignozzi remarks that the Italian surgeons have not taken up the operative treatment of cholelithiasis and of cirrhosis of the liver as much as surgeons in other countries. In this and in his long article concluded in No. 48, he reviews the whole field of biliary surgery and discusses the various technics, with report of his successful intervention in 10 cases of stones in the gall bladder. In conclusion he classifies the various indications which call for cholecystostomy, for omentopexy or for splenopexy.

## *Books Received*

**Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.**

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Assisted by H. R. M. Landis, M.D., vol. i, March, 1906. Paper. Pp. 304. Price, $6.00 per annum. Philadelphia: Lea Brothers & Co., 1906.

THE EXAMINATION OF THE FUNCTION OF THE INTESTINES, by Means of the Test-Diet, Its Application in Medical Practice and Its Diagnostic and Therapeutic Value. By Prof. Dr. Adolf Schmidt. Authorized Translation from the Latest German Edition, by Charles D. Aaron, M.D. Cloth. Pp. 88. Price, $1.00 net. Philadelphia: F. A. Davis & Co., 1906.

MEDICO-CHIRURGICAL TRANSACTIONS Published by the Royal Medical and Chirurgical Society of London. Vol. 88. (Second Series, Volume the Seventieth). Cloth. Pp. 736. London: Longmans, Green & Co. (For the Royal Medical and Chirurgical Society of London), Paternoster Row, 1906.

THE OPERATIVE TREATMENT OF FRACTURES. By W. A. Lane, M.S., F.R.C.S., Surgeon to Guy's Hospital and Senior Surgeon to the Hospital for Sick Children, Great Ormond Street. Paper. Pp. 144. Price, 7s. 6d. London: The Medical Publishing Company, Ltd., 1905.

A HAND-LIST OF THE BIRDS OF THE PHILIPPINE ISLANDS. By R. C. McGregor and D. C. Worcester. Publication of Department of the Interior, Bureau of Government Laboratories. No. 36. January, 1906. Paper. Pp. 123. Manila: Bureau of Printing, 1906.

BOSTON, THE PLACE AND THE PEOPLE. By M. A. DeWolfe Howe. Illustrated by Louis A. Holman. Cloth. Pp. 397. Price, $2.50. New York: The Macmillan Company.